

## **A. Test Results: Change Management Practices Verification and Validation Review (RMI1)**

### **1.0 Description**

The Change Management Practices Verification and Validation Review evaluated aspects of the Bell Atlantic-Massachusetts (BA-MA) change management process. The objectives of the test were to determine the existence and functionality of procedures for developing and evaluating change proposals, and assess the implementation of the proposals. The test also focused on the reasonableness of change intervals and tracking mechanisms. Interviews, attendance at change management meetings, reviews of BA-MA change notifications, and documentation were conducted to evaluate BA-MA's change management process.

### **2.0 Methodology**

This section summarizes the test methodology.

#### **2.1 Business Process Description**

The Bell Atlantic-Massachusetts change management process evaluated in this test encompasses the systems and processes necessary for establishing and maintaining effective BA-MA/CLEC relationships. The change management process provides the framework by which interested parties can communicate their desired changes, and through which BA-MA is able to communicate subsequent alterations to its systems and processes. Bell Atlantic has defined change management policies and categorizes changes into five (5) types:

- ◆ Type 1 – emergency changes
- ◆ Type 2 – regulatory requirements
- ◆ Type 3 – industry led changes
- ◆ Type 4 – Bell Atlantic initiated changes
- ◆ Type 5 – CLEC requested changes

The change management process governs aspects of the CLEC/Bell Atlantic relationship. All changes to documentation, interfaces, business rules and other functions are subject to the timeframes, tracking, logging and coding of the change management process.

The process can be initiated by submittal of a request for any one of the five types of change listed above. Emergency changes are reserved for modifications that are required immediately to continue doing business. Type 2 and Type 3 changes are required modifications by regulatory bodies or industry forum, respectively. Type 4 changes are initiated by Bell Atlantic and may or may not affect continuing operations of a CLEC. Type 5 changes are initiated by the CLEC. Within each type the submitting entity can provide a priority for the item. BA-MA and the CLECs will then determine the overall priority.

The change management documentation published by Bell Atlantic includes required intervals for evaluation and completion of changes. This includes the requirement that final documentation be available at a specific period prior to implementation of non-emergency changes.

## 2.2 Scenarios

Scenarios were not applicable to this test.

## 2.3 Test Targets & Measures

The test target was BA-MA's change management process. Processes, sub-processes, evaluation measures, and associated test cross-reference numbers are summarized in the following table. The last column, "Test Cross-Reference," indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

**Table 1-1: Test Target Cross-Reference**

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Change Management	Developing Change Proposals	Completeness and consistency of change development process	RMI-1-1, RMI-1-2, RMI-1-3, RMI-1-4, RMI-1-5, RMI-1-6, RMI-1-7, RMI-1-8
Change Management	Evaluating Change Proposals	Completeness and consistency of change development process	RMI-1-1, RMI-1-2, RMI-1-4, RMI-1-7, RMI-1-8
Change Management	Implementing Change	Completeness and consistency of change development process	RMI-1-1, RMI-1-2, RMI-1-3, RMI-1-4, RMI-1-5, RMI-1-6, RMI-1-7, RMI-1-8
Change Management	Intervals	Reasonableness of change interval	RMI-1-3, RMI-1-4, RMI-1-5, RMI-1-6, RMI-1-7, RMI-1-8
Change Management	Documentation	Timeliness of documentation updates	RMI-1-3, RMI-1-4, RMI-1-6
Change Management	Tracking Change Proposals	Adequacy and completeness of change management tracking process	RMI-1-1, RMI-1-3, RMI-1-5, RMI-1-6

## 2.4 Data Sources

The data collected for the test are summarized in the table below.

**Table 1-2: Data Sources for Change Management Practices  
Verification and Validation Review**

Document	File Name	Location in Work Papers	Source
Type 5 (CLEC initiated) Change Requests Since August 1999	BA CR form for UNE app to app for troubles.doc	RMI-1-A-I-1	Bell Atlantic
Bell Atlantic response to Verification and Validation letter	Hard Copy	RMI-1-A-I-2	Bell Atlantic
Bell Atlantic response to Interview Summary	Toothman 2_1_00 interview response.doc	RMI-1-A-I-3	Bell Atlantic
Bell Atlantic response to Bell Atlantic-Massachusetts OSS Trial – Observation Report #55	Obs55supp.doc	RMI-1-A-I-4	Bell Atlantic
Bell Atlantic response to Process Validation	Hard Copy	RMI-1-A-I-5	Bell Atlantic
Bell Atlantic response to supplemental Data Request with new type 5's that have been submitted	KpmgMA5.xls	RMI-1-A-I-6	Bell Atlantic
Principles of Change Management (January 28, 1998)	Prp_227.pdf	RMI-1-A-I-7	Bell Atlantic
Telecom Industry Services Change Management Process (May 22, 1998)	Cm522t1s1.pdf	RMI-1-A-I-8	Bell Atlantic

Document	File Name	Location in Work Papers	Source
Type 1 Notification Process	0811_Type_1_Process.pdf	RMI-1-A-I-9	Bell Atlantic
CLEC Change Management Notification Process (February 2000)	Chg_mg_not.pdf	RMI-1-A-I-10	Bell Atlantic
Industry Change Control Meeting material (August 1999)	Mtg0899.pdf	RMI-1-C-I-1	Bell Atlantic
Industry Change Control Meeting material (September 1999)	Mtg0999.pdf	RMI-1-C-I-2	Bell Atlantic
Telecom Industry Services Change Management Process (July 6, 2000)	CM_Process.pdf	RMI-1-C-I-3	Bell Atlantic
Industry Change Control Meeting material (October 1999)	Mtg1099.pdf	RMI-1-B-I-1	Bell Atlantic
Industry Change Control Meeting material (November 1999)	Mtg1199.pdf	RMI-1-B-I-2	Bell Atlantic
Industry Change Control Meeting material (December 1999)	Mtg1299.pdf	RMI-1-B-I-3	Bell Atlantic
Industry Change Control Meeting material (January 2000)	Mtg0100.pdf	RMI-1-B-I-4	Bell Atlantic
Industry Change Control Meeting material (February 2000)	Mtg0200.pdf	RMI-1-B-I-5	Bell Atlantic
Industry Change Control Meeting material (March 2000)	0300MtgMaterials.pdf	RMI-1-B-I-6	Bell Atlantic

Document	File Name	Location in Work Papers	Source
Industry Change Control Meeting material (April 2000)	0400ICC meeting.pdf	RMI-1-B-I-7	Bell Atlantic
Industry Change Control Meeting material (May 2000)	0509_ICC Mtg.pdf	RMI-1-B-I-8	Bell Atlantic
Industry Change Control Meeting material (June 2000)	June_Materials.pdf	RMI-1-B-I-9	Bell Atlantic
FLASH Announcements (October 1999 to June 2000)	CD-ROM	RMI-1-A-I-11	KPMG Consulting
Bell Atlantic-Massachusetts Master Test Plan Final Version 2.0 (November 24, 1999)	MA MTP Final Version 112499.pdf	RMI-1-A-II-12	KPMG Consulting
KPMG Consulting – Bell Atlantic Verification and Validation letter of Bell Atlantic-Massachusetts Change Management process	Toothman_verif.doc	RMI-1-A-II-13	KPMG Consulting
RMI1 Peer Review	Rmi1testpak.doc	RMI-1-A-II-14	KPMG Consulting
KPMG Consulting – Bell Atlantic Initial Data Request	Toothman_data.doc	RMI-1-A-II-15	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Guide	Rmi1_int_guide.doc	RMI-1-A-II-16	KPMG Consulting

Document	File Name	Location in Work Papers	Source
KPMG Consulting – Bell Atlantic Interview Report	Rmi1_int_report.doc	RMI-1-A-II-17	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Summary	Rmi1_int_summ.doc	RMI-1-A-II-18	KPMG Consulting
Test Results: Change Management Practices Final Report	Hard Copy	RMI-1-A-II-19	KPMG Consulting
Changes to the Validation and Verification of Bell Atlantic Change Management letter	Toothman_verifmod1.doc	RMI-1-A-II-20	KPMG Consulting
KPMG Consulting – Bell Atlantic Supplemental Data Request	Rmi1_data_requestII.doc	RMI-1-A-II-21	KPMG Consulting
Bell Atlantic-Massachusetts OSS Trial – Observation Report #55	MA Observation report 55.pdf	RMI-1-A-II-22	KPMG Consulting
Bell Atlantic-Massachusetts OSS Trial – Observation Report #55 KPMG Consulting’s response to Bell Atlantic’s response	Obs55suppKPMG.doc	RMI-1-A-II-23	KPMG Consulting
Bell Atlantic-Massachusetts OSS Trial – Observation Report #92	MA Observation report 92.pdf	RMI-1-A-II-24	KPMG Consulting
Bell Atlantic-Massachusetts OSS Trial – Observation Report #28	MA Observation report 28.pdf	RMI-1-A-II-25	KPMG Consulting
Type 5 (CLEC initiated) Change Request	Change Request Template.doc	RMI-1-B-I-10	Bell Atlantic
Type 5 (CLEC initiated) Change Request	Cmrequest118.doc	RMI-1-B-I-11	Bell Atlantic

Document	File Name	Location in Work Papers	Source
Type 5 (CLEC initiated) Change Request	Cmrequest.doc	RMI-1-B-I-12	Bell Atlantic
Type 5 (CLEC initiated) Change Request	CR_RECRMKS.doc	RMI-1-B-I-13	Bell Atlantic
Type 5 (CLEC initiated) Change Request	CR_RSUNEL.doc	RMI-1-B-I-14	Bell Atlantic
Type 5 (CLEC initiated) Change Request	CSR Availability CR.doc	RMI-1-B-I-15	Bell Atlantic
Type 5 (CLEC initiated) Change Request	E911_CR.doc.rtf	RMI-1-B-I-16	Bell Atlantic
Type 5 (CLEC initiated) Change Request	LIDB_Crtemplate.rtf	RMI-1-B-I-17	Bell Atlantic
Type 5 (CLEC initiated) Change Request	NPANXXCHangeRequest.doc	RMI-1-B-I-18	Bell Atlantic
Type 5 (CLEC initiated) Change Request	PREODR CR.doc	RMI-1-B-I-19	Bell Atlantic
RMI 1 Exit Peer Review Sign-off Letter	Hard Copy	RMI-1-C-II-4	KPMG Consulting

#### 2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

#### 2.5 Evaluation Methods

BA-MA's change management function was evaluated for compliance with stated notification and documentation intervals set forth in the July 6, 2000 Bell Atlantic Telecom Industry Services change management policy documentation. Bell Atlantic Change Management correspondence, the Bell Atlantic Change Control Database, and Bell Atlantic Industry Change Control meeting minutes were reviewed for the period August 1999 through June 2000.

- ◆ A commitment date of either October 1999, November 1999, December 1999, January 2000, February 2000, March 2000, April 2000, May 2000, and/or June 2000.
- ◆ Applicable Bell Atlantic region equal to either North ('N'), Massachusetts ("MA"), or New England.

#### 2.6 Analysis Methods

The Change Management Practices Verification and Validation Review included a checklist of evaluation criteria developed by the test manager during the initial phase of the Bell Atlantic-Massachusetts OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the Change Management Practices Verification and Validation Review.

The data collected were analyzed employing the evaluation criteria referenced above.

### 3.0 Results Summary

This section identifies the evaluation criteria and test results.

#### 3.1 Results & Analysis

The results of this test are presented in the following tables.

*Table 1-3: RMI Evaluation Criteria and Results*

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-1-1	Change management process responsibilities and activities are defined.	Satisfied	Change management processes, responsibilities, and activities are defined in the July 6, 2000 “Bell Atlantic Telecom Industry Services Change Management Process” document. This document describes change management topics such as the procedures and timelines for Type 1, Type 2, Type 3, Type 4, and Type 5 change requests, and decommissioning processes. Change Management procedures were revised based on an agreement which was reached on December 14, 1999 between Bell Atlantic Change Control and the CLEC community to change notification intervals starting with the June 2000 release. Previously, documentation of this new notification interval had not been issued to the CLEC community.
RMI-1-2	Essential elements of the change management process are in place and documented.	Satisfied	The change management process includes the elements necessary for managing Bell Atlantic’s system changes. Procedures exist and are defined for escalations, negotiations, collaboratives, intervals for change, industry notification of system issues and updates, distributing documentation, testing and implementation. These procedures are documented in the “Telecom Industry Services Change Management Process” document.
RMI-1-3	Change management process has a framework to evaluate, categorize, and prioritize proposed changes.	Satisfied	Bell Atlantic conducts monthly prioritization meetings with the CLEC community, where each new Type 4 and Type 5 change request is voted on to prioritize its importance. Bell Atlantic also provides status updates on change requests. Bell Atlantic has a framework to evaluate, categorize, and prioritize proposed changes by discussing each individual change request with the CLEC community.

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-1-4	The change management process includes procedures for allowing input from all interested parties.	Satisfied	<p>Feedback from CLECs is handled through several channels. CLECs can provide input in monthly industry Change Control meetings with Bell Atlantic. Feedback can also be given by directly contacting Bell Atlantic's Change Control organization. There is an industry-wide electronic mailing list that allows CLECs to exchange correspondence to Bell Atlantic and other CLECs subscribing to the mailing list.</p> <p>Through the Type 5 change request process, CLECs can directly request modifications and new functionality from BA-MA.</p>
RMI-1-5	The change management process has defined and reasonable intervals for considering and notifying customers about proposed changes.	Satisfied	<p>The change management process was documented and notification intervals are described in the "Telecom Industry Services Change Management Process" document.</p> <p>There are five (5) notification categories:</p> <ol style="list-style-type: none"> <li>1. System Outages</li> <li>2. Slow Responses</li> <li>3. System Availability</li> <li>4. Type 1 Change Requests</li> <li>5. Type 2-5 Change Requests</li> </ol> <p>Each of the categories has defined intervals and notification processes.</p> <p>The Bell Atlantic System Support (BASS) Help Desk supports the Bell Atlantic Change Management team by providing notification for Type 1 Emergency announcements. BASS is a 24/7 organization that is capable of reporting emergency announcements. BASS is directly responsible to the Change Management team in this role.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-1-6	Documentation regarding proposed changes is distributed on a timely basis.	Satisfied	<p>BA-MA met the intervals for documentation from October 1999 to June 2000 as the averages described below:</p> <p>Type 1 – 99%</p> <p>Type 2 – 100%</p> <p>Type 3 – 100%</p> <p>Type 4 – 77%</p> <p>Type 5 – 100%</p> <p>BA-MA has improved its interval compliance for Type 4 documentation from 60% prior to the June 2000 release to 100% for the June 2000 release.</p>
RMI-1-7	<p>Procedures and systems are in place to track information such as:</p> <ul style="list-style-type: none"> <li>◆ descriptions of proposed changes,</li> <li>◆ notification dates, and</li> <li>◆ change status.</li> </ul>	Satisfied	<p>Procedures and systems are in place to track information such as description of the proposed changes, notification dates, and change status. This information is tracked in Bell Atlantic's change management database. Industry wide mailings and emergency notifications are used to communicate this information to CLECs. The description, classification, documentation reference, and notification dates are also summarized at the monthly Industry Change Control meetings.</p>
RMI-1-8	Criteria are defined for the prioritization system and for severity coding.	Satisfied	<p>Bell Atlantic has a defined prioritization and severity coding system.</p> <p>Prioritization of Bell Atlantic and CLEC change requests are performed monthly at the Industry Change Control meetings which is documented in the "Telecom Industry Services Change Management Process" published on July 6, 2000.</p> <p>The Bell Atlantic System Support Help Desk assigns a severity code and priority for all emergency scenarios.</p>

**Table 1-4: RMII Summary of Compliance Assessment for Notification and Documentation Intervals by Change Type (October 1999 - June 2000)**

<b>Change Type</b>	<b>Applicable Intervals and Timelines</b>	<b>Notification Interval Compliance</b>	<b>Documentation Interval Compliance</b>
<b>Type 1</b> (Emergency Maintenance)	Typically hours to several days.	234 of 237	234 of 237
<b>Type 2</b> (Regulatory)	Varies based on regulatory and legal requirements.	7 of 7	7 of 7
<b>Type 3</b> (Industry Standard)	Required notification interval is fifteen (15) business days prior to providing final documentation.  Required documentation interval is less than 100 days prior to implementation.	10 of 10	10 of 10
<b>Type 4</b> (Bell Atlantic Originated) prior to June 2000 release	Required notification interval is sixty-six (66) days prior to implementation.  Required documentation interval is forty-five (45) days prior to implementation.  There are no required intervals for new functionality roll-outs.	60 of 65	39 of 65
<b>Type 4</b> (Bell Atlantic Originated) June 2000 release	Required notification for EDI specifications interval is sixty-six (66) days prior to implementation.  Required notification for Business Rules interval is seventy-three (73) days prior to implementation.  Required documentation interval is forty-five (45) days prior to implementation.  There are no required intervals for new functionality roll-outs.	46 of 46	46 of 46

Change Type	Applicable Intervals and Timelines	Notification Interval Compliance	Documentation Interval Compliance
<b>Type 5</b> (CLEC Originated) prior to June 2000 release	Required notification interval is sixty-six (66) days prior to implementation.  Required documentation interval is forty-five (45) days prior to implementation.  There are no required intervals for new functionality roll-outs.	2 of 2	2 of 2
<b>Type 5</b> (CLEC Originated) prior to June 2000 release	Required notification for EDI specifications interval is sixty-six (66) days prior to implementation.  Required notification for Business Rules interval is seventy-three (73) days prior to implementation.  Required documentation interval is forty-five (45) days prior to implementation.  There are no required intervals for new functionality roll-outs.	0 of 0	0 of 0

#### *Type 4 – Change Request Interval Modification*

From the period of October 1999 through April 2000 the following intervals apply:

- ◆ CLECs have fifteen (15) business days from the time they are provided initial documentation to provide BA-MA feedback on business rules and EDI specifications.
- ◆ BA-MA releases its final documentation forty-five (45) calendar days from the scheduled implementation date.

A combination of these two notification intervals, results in a notification interval of no less than sixty-six (66) calendar days. In an analysis of all Type 4s that were applicable to Bell Atlantic-North where implementation was scheduled from October 1999 through April 2000 release, 60% of the CRs met the notification intervals. This period included the release of LSOG4.

At the December 14, 1999 Industry Change Control Meeting, Bell Atlantic and the CLEC community agreed on a new notification interval for Type 4 changes. The agreed notification interval applied to the June 2000 release forward. Initial notification of Type 4 changes was agreed to provide seventy-three (73) days prior to the change release. Other milestones include:

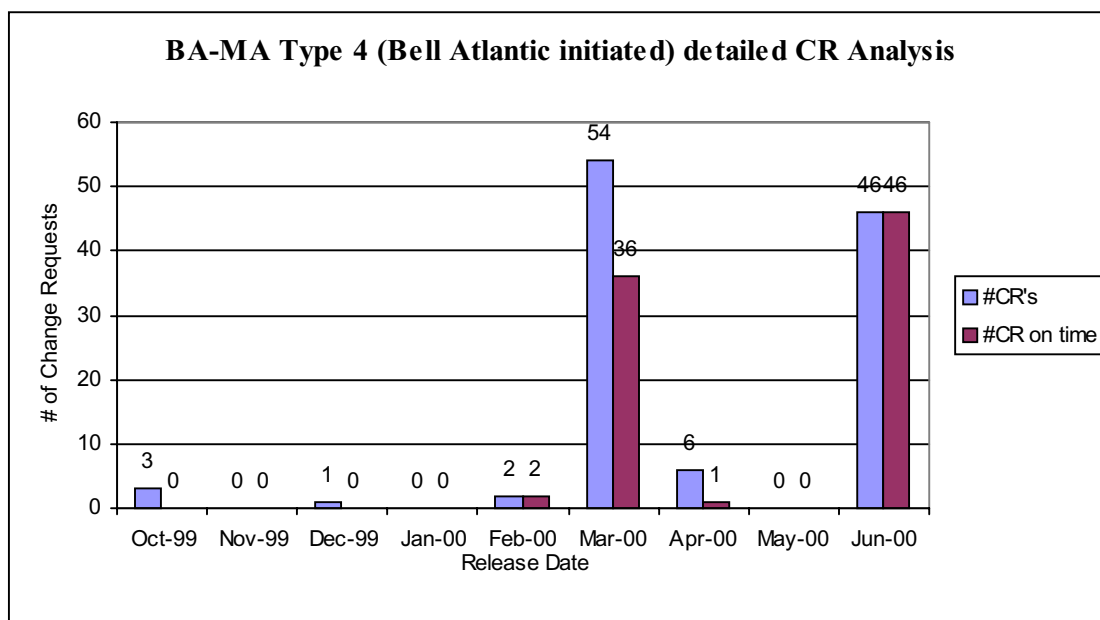
- ◆ Bell Atlantic is to provide the CLECs with initial documentation to allow a fifteen (15) business-day-comment period for the CLECs to provide feedback.
- ◆ Following the fifteen (15) business-day-comment period, Bell Atlantic Change Control will have five (5) business days to provide feedback prior to releasing final documentation.
- ◆ Once final documentation is provided by Bell Atlantic, there will be a forty-five (45) calendar-day period before the change implementation date.

During the June 2000 release, BA-MA met the Type 4 interval 100% of the time.

#### *KPMG Consulting's Analysis of Type 4 Change Requests*

Each CR is composed of potentially more than one supporting document. For example, CR#919 is composed of four (4) documents: LSOG3 EDI Specifications, LSOG3 Pre-Order Business Rules, LSOG4 EDI Specifications, and LSOG4 Pre-Order Business Rules. Thus, each CR may include documentation and specifications supporting a number of changes. For the purposes of this analysis, KPMG Consulting unbundled each CR in order to analyze BA-MA's Change Management's ability to provide documentation. The results are illustrated in Figure 1-1 and Figure 1-2.

**Figure 1-1: Type 4 Interval Compliance for RMII**



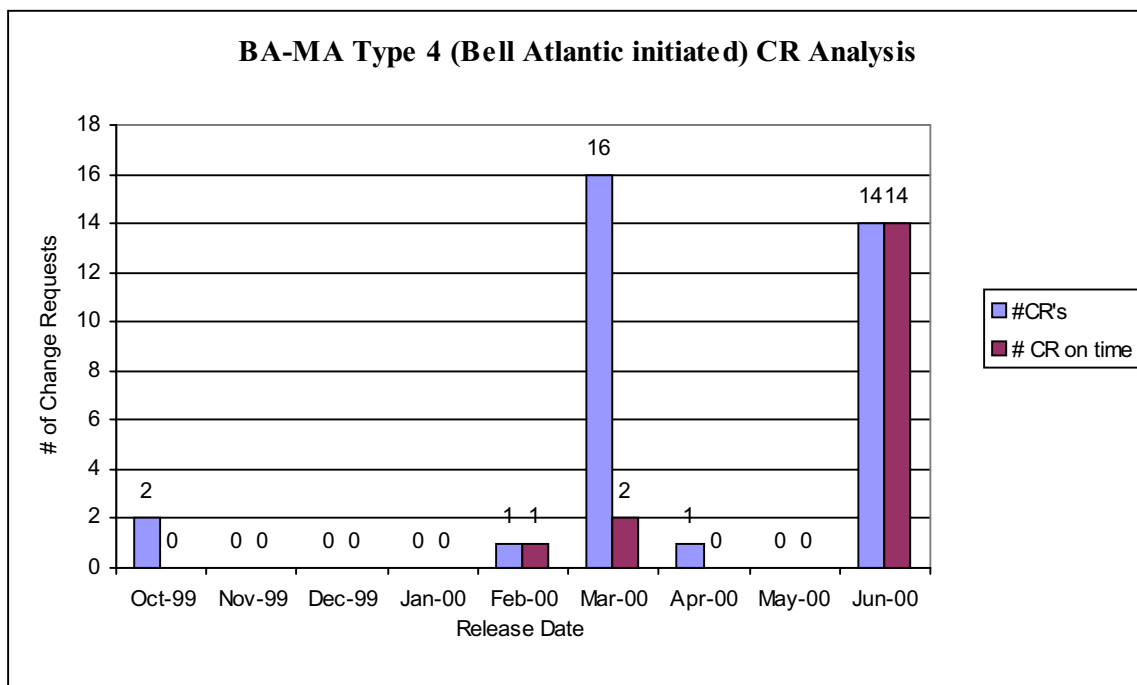
**Table 1-5: Type 4 Interval Compliance for RMII**

	Oct 99	Nov 99	Dec 99	Jan 00	Feb 00	Mar 00	Apr 00	May 00	Jun 00	Total
Type 4 CR only	0 of 3	0 of 0	0 of 0	0 of 0	2 of 2	36 of 54	1 of 6	0 of 0	46 of 46	85 of 111
Percentage Intervals met	0%	n/a	n/a	n/a	100%	67%	17%	n/a	100%	77%

The data compiled in Figure 1-1 and Figure 1-2 resulted in a June 2000 release success rate of 100% (46 of 46) using the agreed upon seventy-three (73) day interval. For the period prior to the June 2000 release (October 1999 to April 2000) BA-MA, using the sixty-six (66) day interval, the success rate was 60% (39 of 65). The period before the June 2000 release (October 1999 to March 2000) includes the LSOG4 release which had a success rate of 64% (38 of 59). Based on this analysis, KPMG Consulting found that BA-MA exhibited improvement over the period from October 1999 to June 2000.

#### *Alternative Analysis of Type 4 Interval Periods*

The analysis of Type 4 CRs can also be made based on the CR number only. This type of analysis gives each Type 4 CR a “pass/fail.” The following graph (Figure 1-3) illustrates BA-MA compliance for Type 4 changes, from the period of October 1999 to June 2000 using the “pass/fail” method.

**Figure 1-2: Type 4 Interval Compliance for RMII**

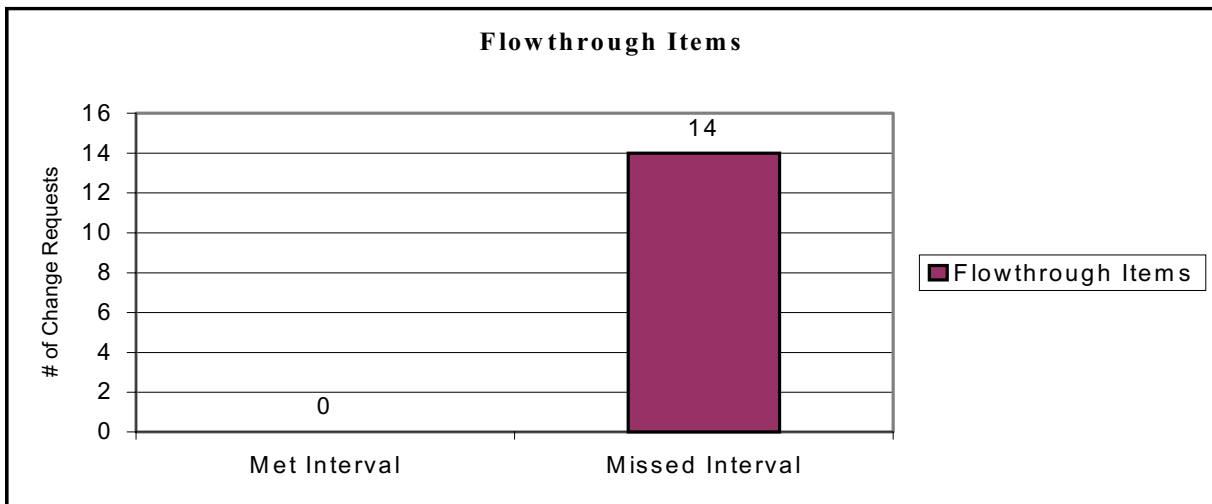
**Table 1-6: Type 4 Interval Compliance for RMII**

	Oct 99	Nov 99	Dec 99	Jan 00	Feb 00	Mar 00	Apr 00	May 00	Jun 00	Total
Type 4 CR's	0 of 2	0 of 0	0 of 0	0 of 0	1 of 1	2 of 16	0 of 1	0 of 0	14 of 14	17 of 34
Percentage intervals met	0%	n/a	n/a	n/a	100 %	13%	0%	n/a	100%	50%

The data compiled in Figure 1-3 and Figure 1-4 resulted in a June 2000 release success rate of 100% (14 of 14) using the agreed upon seventy-three (73) day interval. For the period prior to the June 2000 release (October 1999 to April 2000), using the sixty-six (66) day interval, BA-MA had a success rate of 15% (3 of 20). The period before the June 2000 release (October 1999 to March 2000) includes the LSOG4 release which had a success rate of 18% (3 of 19). Based on this analysis, KPMG Consulting found that BA-MA exhibited improvement over the period from October 1999 to June 2000.

#### *Flowthrough Changes*

Type 4 flowthrough items were reviewed for the duration of BA-MA's testing period of October 1999 to June 2000.

**Figure 1-3: Flowthrough Type 4 Interval Compliance for RMII**

**Table 1-7: Flowthrough Type 4 Interval Compliance for RM11**

	<b>Oct 99</b>	<b>Nov 99</b>	<b>Dec 99</b>	<b>Jan 00</b>	<b>Feb 00</b>	<b>Mar 00</b>	<b>Apr 00</b>	<b>May 00</b>	<b>Jun 00</b>	<b>Total</b>
Flowthrough Items to meet Type 4 Interval	0 of 3	0 of 0	0 of 4	0 of 0	0 of 3	0 of 0	0 of 3	0 of 0	0 of 1	0 of 14

BA-MA addressed the concern that flowthrough items would affect the CLECs by holding a Notifications Workshop on May 1, 2000. The CLECs verbally agreed that the interval for flowthrough items could be “negotiable.” In addition, the “TIS Change Management Process” documentation states:

“In the event that Bell Atlantic is forced to deviate from the Type 4 (Bell Atlantic Originated) process for new non-impacting interface functionality, Bell Atlantic will notify all TCs of the deviation as promptly as possible”(96)

Furthermore, to address flowthrough items, the “Principles of Change Management” document states:

“\*The 45 day interval for Type 4 changes is expected to be the norm, assuming utilization of the FCC’s short term notification process, and notwithstanding Bell Atlantic’s right to provide a shorter notice pursuant to said short term notification process; in some instances it will make sense to provide more notification, or less notification, based upon the severity and the impact of the change. For example, if the change has benefit and has little material impact on the interface, Bell Atlantic can implement the changes in less than 45 days, in compliance with FCC and state rules.”(5)

KPMG Consulting has therefore excluded fourteen (14) flowthrough items from the analysis of Bell Atlantic's interval compliance.



## **B. Test Results: Interface Development Verification and Validation Review (RMI2)**

### **1.0 Description**

The Interface Development Verification and Validation Review evaluated aspects of Bell Atlantic-Massachusetts (BA-MA) Interface Development procedures. The objectives of the test were to determine the existence and functionality of procedures for developing, publicizing, conducting, managing, and monitoring interface development and interface development support for CLECs. Interviews and procedural reviews were conducted to evaluate Bell Atlantic's Interface Development procedures.

### **2.0 Methodology**

This section summarizes the test methodology.

#### **2.1 Business Process Description**

Competitive Local Exchange Carriers (CLECs) may access BA-MA's systems for Order, Pre-Order and other services using an Electronic Data Interchange (EDI) interface and a Web Graphical User Interface (GUI). CLECs that intend to interface with Bell Atlantic are instructed to initiate their efforts through their BA-MA Account Manager. A Bell Atlantic interface development specialist is assigned to assist the CLEC in accessing and using the interfaces.

A CLEC connecting to BA-MA via EDI for the first time experiences the new entrant testing process, in which the CLEC develops its interface to BA-MA specifications. Afterwards, the CLEC interface is connected to BA-MA's CLEC Test Environment (CTE) and undergoes a sequence of connections and transactions-related tests to ensure both interfaces can communicate and exchange transactions correctly. The CTE gives a CLEC the ability to test connectivity and send/receive test transactions in a test environment.

When BA-MA plans a major release to its interface software, it follows a prescribed release process called the new release process. This process consists of BA-MA releasing the new version of the software in the CTE several weeks before the new version is implemented in the production environment. CLECs then have the ability to test their own interfaces against the new BA-MA software release in a test environment in advance of connecting to the production environment with the new release.

When a customer desires to use the Web GUI, Bell Atlantic's initial preparation steps include providing access to training and documentation, as well as providing necessary security hardware and passwords. The steps required to facilitate access to the EDI interface are more extensive. Bell Atlantic is responsible for working with CLECs to establish EDI connectivity and to provide access to non-production systems so that CLECs may test their interface capabilities prior to live implementation.

## 2.2 Scenarios

Scenarios were not applicable to this test.

## 2.3 Test Targets & Measures

The test target was to determine the existence and functionality of procedures for developing, publicizing, conducting, managing, and monitoring interface development and interface development support for CLECs. Processes, sub-processes, evaluation measures, and associated test cross-reference numbers are summarized in the following table. The last column, “Test Cross-Reference,” indicates where the particular measures are addressed in Section 3.1 “Results & Analysis.”

**Table 2-1: Test Target Cross-Reference**

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Developing Interface/ Software Methodology	Software development	Adequacy and completeness of software development methodology	RMI-2-1, RMI-2-2, RMI-2-3
Developing Interface/ Software Methodology	Interface Development Methodology	Adequacy and completeness of interface development methodology	RMI-2-1, RMI-2-2, RMI-2-3, RMI-2-4, RMI-2-5, RMI-2-6, RMI-2-7
Developing Interface/ Software Methodology	Distribution of Interface Development Methodology Documentation	Adequacy and completeness of interface development methodology document distribution procedures	RMI-2-4, RMI-2-5, RMI-2-6, RMI-2-7
Interface Testing	Availability of Functioning Test Environments	Availability of functioning test environments for all supported interfaces	RMI-2-8, RMI-2-9, RMI-2-10, RMI-2-11, RMI-2-12, RMI-2-13
Interface Testing	Distribution of Interface Testing Methodology Documentation	Adequacy and completeness of interface testing methodology document distribution procedures	RMI-2-12, RMI-2-13, RMI-2-14
Interface Testing	Provision of Support for Interface Testing	Availability and documentation of provision of support for interface testing	RMI-2-11, RMI-2-13, RMI-2-14, RMI-2-15, RMI-2-16

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Developing and Maintaining Testing and Production Interfaces	Implementation	Compliance with schedule of interface development deliverables (as defined in the TIS Change Management Process document)	RMI-2-15, RMI-2-16

#### 2.4 Data Sources

The data collected for the test are summarized in the table below.

**Table 2-2: Data Sources for Interface Development Verification and Validation Review**

Document	File Name	Location in Work Papers	Source
RMI-2 MTP Portion	Hard Copy	RMI-2-A-II-1	KPMG Consulting
RMI-2 Detailed Test Plans	Hard Copy	RMI-2-A-II-2	KPMG Consulting
RMI-2 Peer Review Sign-off sheet	Hard Copy	RMI-2-A-II-3	KPMG Consulting
Interface Development Verification Summary	IntDev_VerifSumm.doc	RMI-2-A-II-4	KPMG Consulting
CLEC Handbook Verification Summary	CLEChandbook_VerifSumm.doc	RMI-2-A-II-5	KPMG Consulting
Documentation Verification Summary	Documentation_VerifSumm.doc	RMI-2-A-II-6	KPMG Consulting
RMI-2 Evaluation Criteria	Hard Copy	RMI-2-A-II-7	KPMG Consulting
Procedural Evaluation Results	Hard Copy	RMI-2-A-II-8	KPMG Consulting
KPMG Consulting Data Request	RMI-2 Data_Request.doc	RMI-2-A-II-9	KPMG Consulting
Bell Atlantic Response to Data Request	Response_Data_Request.doc	RMI-2-A-I-10	BA-MA
Bell Atlantic Director of Systems and Infrastructure development - Interview Guide	IntGuideSS.doc	RMI-2-A-II-11	KPMG Consulting
Bell Atlantic Director of Systems and Infrastructure development - Interview Summary	IntSummSS.doc	RMI-2-A-II-12	KPMG Consulting

Document	File Name	Location in Work Papers	Source
Bell Atlantic Director of Systems and Infrastructure development – Response to Interview Summary	Response_IntSumm SS.doc	RMI-2-A-I-13	BA-MA
Bell Atlantic Director of Information Systems – Interview Guide	IntGuideJH.doc	RMI-2-A-II-14	KPMG Consulting
Bell Atlantic Director of Information Systems – Interview Summary	IntSummJH.doc	RMI-2-A-II-15	KPMG Consulting
Bell Atlantic Director of Information Systems - Response to Interview Summary	Response_IntSumm JH.doc	RMI-2-A-I-16	BA-MA
Bell Atlantic Director of CLEC Testing - Interview Guide	IntGuideTT.doc	RMI-2-A-II-17	KPMG Consulting
Bell Atlantic Director of CLEC Testing - Interview Summary	IntSummTT.doc	RMI-2-A-II-18	KPMG Consulting
Bell Atlantic Director of CLEC Testing - Response to Interview Summary	Response_IntSumm TT.doc	RMI-2-A-I-19	BA-MA
Hewlett Packard Interview Summary	IntSummHP.doc	RMI-2-A-II-20	KPMG Consulting
Hewlett Packard Interview Summary Response	Response_IntSumm HP.doc	RMI-2-A-II-21	Hewlett Packard
Interview with KPMG Consulting Internal Interface Development team (I)	KPMG_internal1.doc	RMI-2-A-II-22	KPMG Consulting
Interview with KPMG Consulting Internal Interface Development team (II)	KPMG_internal2.doc	RMI-2-A-II-23	KPMG Consulting
Interview with KPMG Consulting Internal Interface Development team (III)	KPMG_internal3.doc	RMI-2-A-II-24	KPMG Consulting
RMI 2 Observation Report #19	Hard Copy	RMI-2-A-II-25	KPMG Consulting
RMI 2 Observation Report #25	Hard Copy	RMI-2-A-II-26	KPMG Consulting
RMI 2 Observation Report #105	Hard Copy	RMI-2-A-II-27	KPMG Consulting
RMI Exception Report #5	Hard Copy	RMI-2-A-II-28	KPMG Consulting

Document	File Name	Location in Work Papers	Source
Bell Atlantic's response to Exception #5	Hard Copy	RMI-2-A-I-29	BA-MA
Disposition Report for Exception #5	Hard Copy	RMI-2-A-II-30	KPMG Consulting
RMI Exception Report #7	Hard Copy	RMI-2-A-II-31	KPMG Consulting
Bell Atlantic's response for Exception #7	Hard Copy	RMI-2-A-I-32	BA-MA
Disposition Report for Exception #7	Hard Copy	RMI-2-A-II-33	KPMG Consulting
LSOG2 and LSOG4 Web GUI orders	Hard Copy	RMI-2-A-II-34	KPMG Consulting
February 8, 2000 – Bell Atlantic CLEC Testing Conference call notes, February release	Hard Copy	RMI-2-A-II-35	KPMG Consulting
February 11, 2000 – Bell Atlantic CLEC Testing Conference call notes, February release	Hard Copy	RMI-2-A-II-36	KPMG Consulting
February 14, 2000 – Bell Atlantic CLEC Testing Conference call notes, February release	Hard Copy	RMI-2-A-II-37	KPMG Consulting
February 15, 2000 – Bell Atlantic CLEC Testing Conference call notes, February release	Hard Copy	RMI-2-A-II-38	KPMG Consulting
February 17, 2000 – Bell Atlantic CLEC Testing Conference call notes, February release	Hard Copy	RMI-2-A-II-39	KPMG Consulting
February 22, 2000 – Bell Atlantic CLEC Testing Conference call notes, February release	Hard Copy	RMI-2-A-II-40	KPMG Consulting
May 23, 2000 – Bell Atlantic CLEC Testing Conference call notes, June release	Hard Copy	RMI-2-A-II-41	KPMG Consulting
May 30, 2000 – Bell Atlantic CLEC Testing Conference call notes, June release	Hard Copy	RMI-2-A-II-42	KPMG Consulting
June 2, 2000 – Bell Atlantic CLEC Testing Conference call notes, June release	Hard Copy	RMI-2-A-II-43	KPMG Consulting

Document	File Name	Location in Work Papers	Source
June 6, 2000 – Bell Atlantic CLEC Testing Conference call notes, June release	Hard Copy	RMI-2-A-II-44	KPMG Consulting
June 9, 2000 – Bell Atlantic CLEC Testing Conference call notes, June release	Hard Copy	RMI-2-A-II-45	KPMG Consulting
June 12, 2000 – Bell Atlantic CLEC Testing Conference call notes, June release	Hard Copy	RMI-2-A-II-46	KPMG Consulting
June 16, 2000 – Bell Atlantic CLEC Testing Conference call notes, June release	Hard Copy	RMI-2-A-II-47	KPMG Consulting
RMI-2 Exit Peer Review Form	Hard Copy	RMI-2-A-II-48	KPMG Consulting
KPMG Consulting detailed test plans (For February testing)	Hard Copy	RMI-2-A-II-49	KPMG Consulting
Arbitration Report	Hard Copy	RMI-2-A-II-50	KPMG Consulting
KPMG Consulting June release review (I)	Hard Copy	RMI-2-B-II-1	KPMG Consulting
KPMG Consulting June release review (II)	Hard Copy	RMI-2-B-II-2	KPMG Consulting
Bell Atlantic Order Tracking sheet for LSOG4 (February release)	Hard Copy	RMI-2-B-I-3	BA-MA
Bell Atlantic Pre-Order Tracking sheet for LSOG4 (February release)	Hard Copy	RMI-2-B-I-4	BA-MA
Bell Atlantic Order Tracking sheet for LSOG2/3 (Dot release) (February release)	Hard Copy	RMI-2-B-I-5	BA-MA
Bell Atlantic Pre-Order Tracking sheet for LSOG2/3 (Dot release) (February release)	Hard Copy	RMI-2-B-I-6	BA-MA
Bell Atlantic Order Tracking sheet for LSOG4 (June release)	Hard Copy	RMI-2-B-I-7	BA-MA

Document	File Name	Location in Work Papers	Source
Bell Atlantic Pre-Order Tracking sheet for LSOG4 (June release)	Hard Copy	RMI-2-B-I-8	BA-MA
Bell Atlantic Order Tracking sheet for LSOG2/3 (June release)	Hard Copy	RMI-2-B-I-9	BA-MA
Bell Atlantic Pre-Order Tracking sheet for LSOG2/3 (June release)	Hard Copy	RMI-2-B-I-10	BA-MA
Test Deck review for February 2000 release (LSOG2/3)	Hard Copy	RMI-2-B-II-11	KPMG Consulting
Test Deck review for February 2000 release (LSOG4)	Hard Copy	RMI-2-B-II-12	KPMG Consulting
Test Deck review for June 2000 release (LSOG2/3)	Hard Copy	RMI-2-B-II-13	KPMG Consulting
Test Deck review for June 2000 release (LSOG4)	Hard Copy	RMI-2-B-II-14	KPMG Consulting
CLEC Data – I <b><u>(CLEC Proprietary Data)</u></b>	Hard Copy	RMI-2-B-II-15	KPMG Consulting
CLEC Data – II <b><u>(CLEC Proprietary Data)</u></b>	Hard Copy	RMI-2-B-II-16	KPMG Consulting
LSOG4 CTE Call log	Hard Copy	RMI-2-B-II-17	KPMG Consulting
KPMG Consulting Help Desk log	Help Desk.mdb	RMI-2-B-II-18	KPMG Consulting
HP Index to ticket reports	Hard Copy	RMI-2-B-II-19	Hewlett Packard
HP testing and EDI ticket reports	MA Section1 Testing.pdf	RMI-2-B-II-20	Hewlett Packard
HP System and Software ticket reports	Hard Copy	RMI-2-B-II-21	Hewlett Packard
HP Gateway interconnect ticket reports	Hard Copy	RMI-2-B-II-22	Hewlett Packard
Interview with KPMG Consulting Internal Interface Development Team (III)	Hard Copy	RMI-2-B-II-23	KPMG Consulting

Document	File Name	Location in Work Papers	Source
Observation #105 Review	Hard Copy	RMI-2-B-II-24	KPMG Consulting
KPMG Consulting Quality Assurance Testing (Pre-Order log)	Hard Copy	RMI-2-B-II-25	KPMG Consulting
KPMG Consulting Quality Assurance Testing (Order log)	Hard Copy	RMI-2-B-II-26	KPMG Consulting
KPMG Consulting Systems Readiness Test (SRT, Pre-Order log)	Hard Copy	RMI-2-B-II-27	KPMG Consulting
KPMG Consulting Systems Readiness Test (SRT, Order log)	Hard Copy	RMI-2-B-II-28	KPMG Consulting
Bell Atlantic Pre-Order Business Rules (Version 2.5.1, LSOG3)	Hard Copy	RMI-2-C-I-1	BA-MA
Bell Atlantic Pre-Order Business Rules (Web GUI Supplement, Version 2.5.1, LSOG3)	Hard Copy	RMI-2-C-I-2	BA-MA
Bell Atlantic Combined Order Documentation, Business Rules (Version 4.1.1, LSOG4)	Hard Copy	RMI-2-C-I-3	BA-MA
Bell Atlantic-North Order Business Rules (Version 1.7, LSOG2)	Hard Copy	RMI-2-C-I-4	BA-MA
Bell Atlantic specifications for Access Service Requests (Version 2.1)	Hard Copy	RMI-2-C-I-5	BA-MA
Bell Atlantic Pre-Order EDI Guide (Version 2.5, Issue 9)	Hard Copy	RMI-2-C-I-6	BA-MA
Bell Atlantic-North Pre-Order Documentation (Version 2.5.1, LSOG3 & Issue 9)	Hard Copy	RMI-2-C-I-7	BA-MA
Bell Atlantic Common Pre-Order Documentation (Version 2.4.1, LSOG3 & Issue 9)	Hard Copy	RMI-2-C-I-8	BA-MA
Bell Atlantic-North Order EDI Guide (Version 1.7, Issue 8)	Hard Copy	RMI-2-C-I-9	BA-MA

Document	File Name	Location in Work Papers	Source
Bell Atlantic Local Services Common Web GUI User Guide (Version 3.3)	Hard Copy	RMI-2-C-I-10	BA-MA
Wholesale Performance – March 9, 2000	Hard Copy	RMI-2-C-I-11	BA-MA
Wholesale Performance-February 24, 2000	Hard Copy	RMI-2-C-I-12	BA-MA
LSOG4 Pre-Order and Order documentation Timeline	Hard Copy	RMI-2-D-I-1	BA-MA
Revised – Pre Order and Order documentation timeline	Hard Copy	RMI-2-D-I-2	BA-MA
CLEC Testing Environment	Hard Copy	RMI-2-D-I-3	BA-MA
12/14 Summary of documentation for February release	Hard Copy	RMI-2-D-I-4	BA-MA
LSOG3 – Individual North Report for Bell Atlantic Pre-Order Business rules	Hard Copy	RMI-2-D-I-5	BA-MA
Bell Atlantic's LSOG4 Order Business Rules (Version 4.1.1)	Hard Copy	RMI-2-D-I-6	BA-MA
December 15 Summary of documentation for February release	Hard Copy	RMI-2-D-I-7	BA-MA
December 20 Summary of documentation for February release	Hard Copy	RMI-2-D-I-8	BA-MA
Revised North LSOG2 documentation – 12/22 Summary	Hard Copy	RMI-2-D-I-9	BA-MA
Summary of Bell Atlantic Test Decks (February release)	Hard Copy	RMI-2-D-I-10	BA-MA
BA-MA LSOG4 Test Deck (February release)	Hard Copy	RMI-2-D-I-11	BA-MA
BA-MA LSOG4 Test Deck (February release)	Hard Copy	RMI-2-D-I-12	BA-MA
Unavailability of the CTE	Hard Copy	RMI-2-D-I-13	BA-MA
Summary of documentation – LSOG4 Test Decks (February release)	Hard Copy	RMI-2-D-I-14	BA-MA
BA-MA LSOG4 Test Deck (February release)	Hard Copy	RMI-2-D-I-15	BA-MA

Document	File Name	Location in Work Papers	Source
February new release testing status	Hard Copy	RMI-2-D-I-16	BA-MA
Follow up Conference Call (June release)	Hard Copy	RMI-2-D-I-17	BA-MA
CTE hours and Status Meeting Logistics	Hard Copy	RMI-2-D-I-18	BA-MA
February new release testing status as of January 27, 2000	Hard Copy	RMI-2-D-I-19	BA-MA
February new release testing status as of January 30, 2000	Hard Copy	RMI-2-D-I-20	BA-MA
February new release testing status as of February 3, 2000	Hard Copy	RMI-2-D-I-21	BA-MA
Revised BA-MA LSOG2/3 Test Deck (February release)	Hard Copy	RMI-2-D-I-22	BA-MA
Revised BA-MA LSOG4 Test Deck (February release)	Hard Copy	RMI-2-D-I-23	BA-MA
February new release testing status as of February 6, 2000	Hard Copy	RMI-2-D-I-24	BA-MA
February 9 Summary of the documentation (April release)	Hard Copy	RMI-2-D-I-25	BA-MA
BA-MA LSOG4 Order Business rules, Version 4.2	Hard Copy	RMI-2-E-I-1	BA-MA
February new release testing status as of February 10, 2000	Hard Copy	RMI-2-E-I-2	BA-MA
February new release testing status as of February 13, 2000	Hard Copy	RMI-2-E-I-3	BA-MA
Revised BA-MA LSOG2/3 Test Deck (February release)	Hard Copy	RMI-2-E-I-4	BA-MA
New release of LSOG4 EDI documentation	Hard Copy	RMI-2-E-I-5	BA-MA
Revised BA-MA LSOG4 Test Deck (February release)	Hard Copy	RMI-2-E-I-6	BA-MA
Revised BA-MA LSOG2/3 Test Deck (February release)	Hard Copy	RMI-2-E-I-7	BA-MA
February 17 Summary of documentation	Hard Copy	RMI-2-E-I-8	BA-MA
BA's LSOG4 Order EDI Specifications, Version 4.2	Hard Copy	RMI-2-E-I-9	BA-MA

Document	File Name	Location in Work Papers	Source
February new release testing as of February 17, 2000	Hard Copy	RMI-2-E-I-10	BA-MA
LSOG4 February release delayed one week	Hard Copy	RMI-2-E-I-11	BA-MA
February new release testing status as of February 24, 2000	Hard Copy	RMI-2-E-I-12	BA-MA
LSOG2/3 February Production Release results	Hard Copy	RMI-2-E-I-13	BA-MA
Revised BA-MA LSOG2/3 Test Deck (February release)	Hard Copy	RMI-2-E-I-14	BA-MA
February new release of LSOG4 into Production	Hard Copy	RMI-2-E-I-15	BA-MA
February new release testing status as of February 29, 2000	Hard Copy	RMI-2-E-I-16	BA-MA
March 1 Summary of documentation (April release)	Hard Copy	RMI-2-E-I-17	BA-MA
Revised BA-MA LSOG4 Test Deck	Hard Copy	RMI-2-E-I-18	BA-MA
Informational Message Regarding the April release	Hard Copy	RMI-2-E-I-19	BA-MA
April 5 Summary of Documentation (June release)	Hard Copy	RMI-2-E-I-20	BA-MA
CLEC Test Planning for June release	Hard Copy	RMI-2-E-I-21	BA-MA
April 12 Summary of Documentation (June release)	Hard Copy	RMI-2-E-I-22	BA-MA
Informational Message: Bell Atlantic EDI Gateway – Network Associates PGP Version	Hard Copy	RMI-2-E-I-23	BA-MA
System Support Help Desk Hours	Hard Copy	RMI-2-E-I-24	BA-MA
CLEC Test Plans Due Today	Hard Copy	RMI-2-E-I-25	BA-MA
Summary of Documentation for Bell Atlantic Test Decks (June release)	Hard Copy	RMI-2-F-I-1	BA-MA
BA-MA LSOG2/3 Test Deck (June release)	Hard Copy	RMI-2-F-I-2	BA-MA

Document	File Name	Location in Work Papers	Source
BA-MA LSOG4 Test Deck (June release)	Hard Copy	RMI-2-F-I-3	BA-MA
Documentation Quality Assessment (June release)	Hard Copy	RMI-2-F-I-4	BA-MA
June Pre-Release CLEC Testing Calls	Hard Copy	RMI-2-F-I-5	BA-MA
June Pre-Release CLEC Testing Calls (Amendment)	Hard Copy	RMI-2-F-I-6	BA-MA
June new release testing status as of May 21, 2000	Hard Copy	RMI-2-F-I-7	BA-MA
Schedule for Migration to Netlink in CTE	Hard Copy	RMI-2-F-I-8	BA-MA
June new release testing status as of May 25, 2000	Hard Copy	RMI-2-F-I-9	BA-MA
June new release testing status as of June 1, 2000	Hard Copy	RMI-2-F-I-10	BA-MA
CTE Hours of Availability Extended	Hard Copy	RMI-2-F-I-11	BA-MA
CTE Hours of Availability Extended	Hard Copy	RMI-2-F-I-12	BA-MA
June new release testing status as of June 8, 2000	Hard Copy	RMI-2-F-I-13	BA-MA
CTE Hours of Availability Extended	Hard Copy	RMI-2-F-I-14	BA-MA
Summary of Documentation for Bell Atlantic Test Decks (June Release, Version 1.2)	Hard Copy	RMI-2-F-I-15	BA-MA
BA-MA LSOG2/3 Test Deck (June Release, Version 1.2)	Hard Copy	RMI-2-F-I-16	BA-MA
BA-MA LSOG4 Test Deck (June Release, Version 1.2)	Hard Copy	RMI-2-F-I-17	BA-MA
June new release testing status as of June 17, 2000	Hard Copy	RMI-2-F-I-18	BA-MA
Root Directory differences	Hard Copy	RMI-2-G-I-1	BA-MA
KPMG ORT Analysis	Hard Copy	RMI-2-G-II-2	KPMG Consulting
Netlink Directory	Hard Copy	RMI-2-G-I-3	BA-MA

Document	File Name	Location in Work Papers	Source
KPMG Data request – Utilization summaries	Hard Copy	RMI-2-G-I-4	BA-MA
Test Deck development process	Hard Copy	RMI-2-G-I-5	BA-MA
Network Element Utilization	Hard Copy	RMI-2-G-I-6	BA-MA
CLEC Handbook (March 2000 release) – Volume I	Hard Copy	RMI-2-G-I-7	BA-MA
CLEC Handbook (March 2000 release) – Volume II	Hard Copy	RMI-2-G-I-8	BA-MA
CLEC Handbook (March 2000 release) – Volume III	Hard Copy	RMI-2-G-I-9	BA-MA
Resale Handbook (September 1999) – Volume I	Hard Copy	RMI-2-G-I-10	BA-MA
Resale Handbook (March 2000) – Volume II	Hard Copy	RMI-2-G-I-11	BA-MA
Resale Handbook (September 2000) – Volume III	Hard Copy	RMI-2-G-I-12	BA-MA

#### 2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

#### 2.5 Evaluation Methods

The following activities were performed as part of the Interface Development Verification and Validation Review:

- ◆ Review of Bell Atlantic provided Interface Development documentation
- ◆ Interviews with Bell Atlantic personnel
- ◆ Meetings with the CLEC community
- ◆ Interviews with internal KPMG Consulting Interface Development personnel
- ◆ Observations of ongoing interface development activities

#### 2.6 Analysis Methods

The Interface Development Verification and Validation Review test included a checklist of evaluation criteria developed by the test manager during the initial phase of the Bell Atlantic-Massachusetts OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the Interface Development Verification and Validation Review.

The data collected were analyzed employing the evaluation criteria referenced above.

### 3.0 Results Summary

This section identifies the evaluation criteria and test results.

#### 3.1 Results & Analysis

The results of this test are presented in the table below.

**Table 2–3: RMI2 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
	<b>Methodology:</b>		
RMI-2-1	Bell Atlantic has a software/ interface development methodology that addresses requirements and specification definition, design, development, testing and implementation.	Satisfied	Bell Atlantic follows a methodical process for developing both its software and interface specifications. The methodology for developing the interface specifications includes defining the business rules, EDI specifications, following the Change Management procedures, internal quality assurance testing, documentation and distribution of the interface specifications. The implementation of the software also follows a methodical procedure as described in the CLEC/Resale Handbook (March 2000, Volume II, Sections 1.4 and 4.5).
RMI-2-2	Interface development methodology delineates the quality assurance process.	Satisfied	Quality assurance processes are in place within Bell Atlantic as part of the interface development for both the specifications and software development process. BA-MA utilizes an internal custom-made application to help integrate the business rules and EDI specifications. Specifically, this application helps remove the discrepancies and inconsistencies with the EDI specifications and business rules.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p>Bell Atlantic has several approaches and organizations that deal with the quality assurance of its interface development methodology. Bell Atlantic first addresses interface development quality through individual application development methodologies. The software development organization within Bell Atlantic is divided into several smaller teams responsible for developing a particular interface application, each of which conducts its own unit or modular testing.</p> <p>Bell Atlantic's quality assurance testing methodology consists of several levels and types of testing. This testing is spread across different teams. Bell Atlantic utilizes a standard regression test suite called the "Quality Baseline Validation Test Deck" ("Test Deck"), which contains a known set of standard scenarios with expected results. Bell Atlantic runs this Test Deck for its software release and the quality of the software is established based on the results. Information regarding the Test Deck and the quality assurance process is provided in the CLEC/Resale Handbook (March 2000, Volume II, Section 4.5).</p> <p>For the February 2000 new release test period, KPMG Consulting executed the Bell Atlantic-Massachusetts published Test Decks for LSOG2 and LSOG4. KPMG Consulting observed some quality issues with the LSOG4 Test Deck. These quality issues did not prevent KPMG Consulting from completing its LSOG4 regression test. The LSOG2 test deck was of substantially higher quality than the LSOG4 test deck and we completed our CTE Testing of LSOG2 within one week.</p> <p>However, for the June 2000 release, KPMG Consulting executed the Bell Atlantic-Massachusetts published Test Decks for LSOG2 and LSOG4 and noted improvements in the quality of the Test Deck results.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
	<b>Interface Specifications:</b>		
RMI-2-3	Responsibilities and procedures for developing and updating, interface specification document(s) are defined.	Satisfied	<p>Responsibilities and procedures are in place for developing and updating the interface specification documents. The procedure for developing and updating the interface specifications involves a coordinated effort between internal Bell Atlantic software development teams, the business rules development team, the Bell Atlantic Change Control organization, and CLECs. Through the Bell Atlantic Change Control forum, information is exchanged between Bell Atlantic and the CLEC community to work collectively towards developing and updating interface specifications. Results stemming from these collective efforts are distributed to the industry via the Bell Atlantic Change Control electronic mail distribution list. The Bell Atlantic Change Management facilitates the development, updating, and notification of interface specification documents.</p> <p>In addition, the CLEC/Resale Handbook (March 2000, Volume II, Sections 1.4 and 5.5) provides information to CLECs on industry standard/guideline documentation and the industry change management process through which changes to Bell Atlantic OSS interfaces are handled.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-2-4	Interface specifications, which define applicable business rules, data formats and definitions, and transmission protocols, are made available to customers.	Satisfied	<p>CLECs can obtain the interface specifications and other necessary documentation defining the business rules, data formats, definitions and transmission protocols for EDI interface development and Web GUI interface from several sources:</p> <ul style="list-style-type: none"> <li>◆ Bell Atlantic's Wholesale Markets website <a href="http://www.bellatlantic.com/wholesale">http://www.bellatlantic.com/wholesale</a></li> <li>◆ Bell Atlantic Account Manager</li> <li>◆ Bell Atlantic Industry Change Control electronic mails</li> <li>◆ Industry mailing letters</li> </ul> <p>Additional information regarding interface specifications are described in the CLEC/Resale Handbook (March 2000, Volume II, Sections 1.4, 2.1-2.3, 2.5, 4.2, 5.2, and 5.6).</p>
RMI-2-5	On-call customer support for interface specifications is provided.	Satisfied	<p>BA-MA provides on-call customer support through its Bell Atlantic System Support (BASS) Help Desk for interface related issues. This is the primary point of contact for CLECs with concerns regarding interface specifications. The Bell Atlantic Test Manager/Coordinator can also be contacted to assist with any documentation issues during the test period. Further information on the function of the BASS Help Desk is provided in the CLEC Handbook (March 2000, Volume II, Sections 2.4 and 5.3), and Resale Handbook (March 2000, Volume II, Sections 2.4 and 5.3).</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p>Bell Atlantic has several organizations that provide direct support to the BASS Help Desk for interface specification documentation. One organization provides support for issues relating to the Web GUI and business rules documentation. Another organization supports EDI order and pre-order documentation.</p> <p>During its interface development process, KPMG Consulting utilized the Bell Atlantic on-call customer support for interface specifications. Further information is available in the POP5 Work Center/Help Desk Evaluation.</p>
RMI-2-6	Procedures for updating interface specifications are integrated with formal Change Management procedures.	Satisfied	<p>Bell Atlantic updates the interface specifications based on the Change Management process and procedures, which are described in the Change Management documentation such as “The Principles of Change Management” and “Telecom Industry Services Change Management Process.”</p> <p>As part of the Change Management process, Bell Atlantic publishes interface specifications to the industry and allows review/feedback before finalization. Bell Atlantic publishes the specifications through the Bell Atlantic Change Control electronic mail distribution list and posts them on the Bell Atlantic Wholesale Markets website <a href="http://www.bellatlantic.com/wholesale">http://www.bellatlantic.com/wholesale</a>. The CLEC/Resale Handbook (March 2000, Volume II, Sections 1.4 and 5.5) provides further information on the Bell Atlantic Change Management process.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
	<b>Carrier-to-Carrier Testing:</b>		
RMI-2-7	Bell Atlantic has a methodology for conducting carrier-to-carrier testing with customers seeking to interconnect.	Satisfied	<p>Bell Atlantic has a methodology for conducting the carrier-to-carrier testing with customers seeking to interconnect. This information is described in the CLEC Handbook (March 2000, Volume II, Sections 1.5, 2.1, 2.3, 2.5, and 4.5) and Resale Handbook (March 2000, Volume II, Sections 1.5, 2.1, 2.3, 2.5 and 4.5).</p> <p>Bell Atlantic assigns a Test Manager/Coordinator to every CLEC that is performing testing with Bell Atlantic's Operational Support Systems (OSS). For every release of the interface software, both the new entrant CLECs and the new release CLECs are given an opportunity to test their connectivity to Bell Atlantic's OSS.</p> <p>KPMG Consulting began the Quality Assurance (QA) testing by connecting to Bell Atlantic-Massachusetts' CTE. In this environment, the testing was focused on KPMG Consulting sending a set of transactions to Bell Atlantic-Massachusetts' systems and verifying if those transactions were properly received and acknowledged. The next phase of testing was the Systems Readiness Test (SRT). The SRT phase consisted of a set of test transactions sent to Bell Atlantic-Massachusetts' Production systems and verifying that those transactions and acknowledgements were received and accurate. These steps are outlined in the CLEC/Resale Handbook.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-2-8	Functioning test environments are made available to customers for all supported interfaces.	Satisfied	<p>Bell Atlantic provides access to its functioning test environments which support the major interfaces such as the Web GUI interface and the EDI interface. Information on the various test environments is available to the CLECs through Bell Atlantic Change Control, industry mailings, CLEC/Resale Handbook (March 2000, Volume II, Sections 1.5, 2.5 and 4.5) and the Bell Atlantic Wholesale Markets website (<a href="http://www.bellatlantic.com/wholesale">http://www.bellatlantic.com/wholesale</a>).</p> <p>For the connectivity portion of the test, KPMG Consulting operated in Bell Atlantic-Massachusetts' CTE. Once successful connectivity was established, KPMG Consulting operated in the Production environment for SRT and the CTE for new release testing.</p>
RMI-2-9	Carrier-to-carrier test environments are stable and segregated from Bell Atlantic production and development environments.	Satisfied	<p>The CTE is a separate system with its own dedicated set of computers, software, and network elements. The CTE and Production environment each have their own unique IP address.</p> <p>Proper communication channels are established between the various organizations within Bell Atlantic to ensure the stability of the CTE elements such as documentation, software, or operations. The potential impact of these changes to the CTE are discussed in meetings with various groups.</p> <p>During the February 2000 LSOG4 new release period, KPMG Consulting observed and noted that the CTE did not provide a relatively stable setting for testing. The LSOG2 test did not suffer from the same degree of instability. Outages originating from Bell Atlantic-Massachusetts' systems occurred and delayed the ability to conduct tests. For the June 2000 release of LSOG4, KPMG Consulting noticed an improvement in the stability of the CTE. During the times that transactions were being executed in the CTE, KPMG Consulting did not encounter significant outages.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-2-10	On-call customer support for interface testing is provided.	Satisfied	<p>As Bell Atlantic schedules new release testing conference calls with the industry on a regular basis during the new release testing period. This process is described in the CLEC/Resale Handbook (March 2000, Volume II, Section 4.5).</p> <p>The schedule for the new release conference calls is released to the industry through the Bell Atlantic Change Control electronic mail distribution list. The purpose of the calls is to provide CLECs with information and updates on the CTE and the new software releases. As well, this conference bridge allows the CLECs to discuss any issues related to the immediate software release.</p> <p>During KPMG Consulting's interface testing period, Bell Atlantic-Massachusetts did provide on-call support. Per Bell Atlantic-Massachusetts procedure, a Test Manager/Coordinator was assigned to the CLEC (KPMG Consulting) and worked with KPMG Consulting to deal with interface testing issues. The CLEC/Resale Handbook (March 2000, Volume II, Section 4.5) provides a description of the Test Manager/Coordinator role.</p>
RMI-2-11	Carriers are provided with documented specifications for active test environments.	Satisfied	<p>The CLEC Handbook (March 2000, Volume II, Section 4.5) and Resale Handbook (March 2000, Volume II, Section 4.5) contains a description of the CLEC test environment and also gives the details of the process and procedures involved with the new release and new entrant testing processes.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p>Bell Atlantic provides a standard Quality Baseline Validation Test Deck which consists of various scenarios for Orders and Pre-Orders to be tested in the CLEC Testing Environment. The Test Deck is made available to the industry via Bell Atlantic Change Control electronic mail and it is also posted on the Bell Atlantic Wholesale Markets website (<a href="http://www.bellatlantic.com/wholesale">www.bellatlantic.com/wholesale</a>). As observed by KPMG Consulting, the Test Deck specifications are distributed to CLECs through the Bell Atlantic Change Control electronic mail distribution list and are posted on the Bell Atlantic Wholesale Markets website (<a href="http://www.bellatlantic.com/wholesale/">http://www.bellatlantic.com/wholesale/</a>).</p> <p>During the June 2000 release, KPMG Consulting observed some quality issues with the Bell Atlantic-Massachusetts published Test Decks for LSO4. Specifically, a part of the Test Deck documentation consists of a set of ordering test case scenarios. Each of these order test case scenarios consists of three components: 1. a Local Service Request (LSR), 2. the expected inbound EDI transaction, and 3. the expected outbound EDI transaction (also known as a Local Service Confirmation [LSC]). The LSR is supposed to map to an inbound EDI transaction, then the inbound EDI transaction is sent to Bell Atlantic-Massachusetts's systems for processing. The returned result should match the expected outbound EDI.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p>When KPMG Consulting executed the Test Deck LSRs, some of the test cases did not yield the expected LSCs. The issue was traced to inaccurately published LSRs. Moreover, KPMG Consulting learned that Bell Atlantic-Massachusetts employed a manual transcription process to transfer the Test Deck LSR information from its internal sources to the published Test Deck documentation; thereby increasing the probability of a typographical error. The inaccurate Test Deck LSR information would prevent the expected LSC from being achieved during testing.</p> <p>At the end of the Massachusetts OSS test, Bell Atlantic-Massachusetts had indicated that it would modify its current Test Deck publication process to address the quality issue with the published LSRs. In particular, the LSR information would no longer be transcribed manually into the Test Deck documentation. Rather, electronic means would be used to transfer the LSR information from internal sources to the published Test Deck documentation. This process is expected to be used for the Test Deck documents that will accompany the scheduled October 2000 EDI software release.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-2-12	Active test environments are subject to version control. Carriers are notified before changes are made to active test environments.	Satisfied	<p>Bell Atlantic follows a specific version control methodology for maintaining the CTE. Whenever a change is made to the CTE it is given a new version number and the changes are logged as necessary.</p> <p>Procedures, including the software version of the published schedule of changes, such as industry letters and Bell Atlantic Change Control mail distributions, and other related documentation are in place to provide notification to the industry regarding any changes being made to the CTE. CLECs are notified of any possible impacting changes to the test environment through the Bell Atlantic Change Management process.</p> <p>Furthermore, during the new release testing period, Bell Atlantic hosts regularly scheduled industry conference calls to update the CLEC community of any activity that has or will occur in the CTE. (CLEC/Resale Handbook, March 2000, Volume III, Section 4.5.2.1).</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-2-13	Procedures are defined to log software “bugs,” errors and omissions in specifications and other issues discovered during carrier-to-carrier testing. Responsibility for repairing the bugs, errors and omissions is assigned to specific Bell Atlantic individuals or groups.	Satisfied	<p>The CLEC/Resale Handbook (March 2000, Volume II, Section 4.5) states the procedures for logging errors and omissions during the carrier-to-carrier testing.</p> <p>Customer support for CLECs during the carrier-to-carrier testing is provided by the Bell Atlantic CLEC Testing group, which uses a trouble reporting system that logs all the errors, defects and other reported CTE related issues. The Bell Atlantic Test Manager/Coordinator is a part of the CLEC Testing group and serves as the primary contact to the CLEC.</p> <p>As described in the CLEC/Resale Handbook (March 2000, Volume II, Section 4.5), Bell Atlantic schedules conference calls on a regular basis with the industry during the new entrant and new release testing period. CLECs are given an opportunity to discuss problems or issues encountered during the testing time. Notification of the conference calls is through the Bell Atlantic Change Control electronic mail distribution list.</p> <p>In case of errors that may impair the CLEC’s ability to conduct testing, Bell Atlantic repairs them with its releases on every Wednesday evening during the new release testing period. If required, Bell Atlantic may implement emergency releases outside regularly scheduled Wednesday evenings. This release process is described in the CLEC/Resale Handbook (March 2000, Volume II, Section 4.5).</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
	<b>Interface Support:</b>		
RMI-2-14	On-call technical support is provided for production interfaces.	Satisfied	<p>On-call customer support is provided primarily by Bell Atlantic System Support (BASS) Help Desk for production interfaces. The BASS Help Desk provides support for interface issues such as EDI related issues, Web GUI login and password problems, business rules, system outages, and other systems related queries. As well, the CLEC may contact its Bell Atlantic Account Manager for assistance.</p> <p>More information is available in the CLEC/Resale Handbook (March 2000, Volume II, Sections 1.4, 2.4, 2.5, and 5.3).</p> <p>During KPMG Consulting's testing period, KPMG Consulting communicated with the BASS Help Desk for support relating to production interfaces. Further information is available in the POP5 Work Center/Help Desk Evaluation.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-2-15	Procedures are defined for logging software “bugs,” errors and omissions in specifications, and other issues discovered during production use of interfaces.	Satisfied	<p>Bell Atlantic Change Management procedures are followed to track production problems. CLECs are referred to the Bell Atlantic System Support (BASS) Help Desk for any issues that may arise during the use of Production interfaces. A Problem Tracking Report (PTR) is maintained throughout the process, which is essentially a trouble ticket consisting of the detailed description of the issue. This trouble ticket system is owned by the Bell Atlantic Telecommunications Group Services (Information Systems) organization.</p> <p>If the BASS Help Desk is unable to resolve any issues regarding the Production interfaces, the problem is referred to a Bell Atlantic team that is knowledgeable and responsible for supporting that particular system or area.</p> <p>The CLEC/Resale Handbook (March 2000, Volume II, Section 2.5) provides a description of the BASS Help Desk trouble logging procedure.</p>
RMI-2-16	Regular communication forums (e.g., meetings, newsletters, and workshops) are held for CLEC interface developers.	Satisfied	<p>Bell Atlantic holds regular communication forums, such as Bell Atlantic Industry Change Control meetings, workshops, industry mailings, and scheduled CLEC conference calls during new release periods for CLEC interface developers. Additionally, information is also available to developers through Bell Atlantic’s website (<a href="http://www.bellatlantic.com/wholesale">http://www.bellatlantic.com/wholesale</a>). The CLEC/Resale Handbook (March 2000, Volume II, Section 4.5) provides some information on the different types of communication forums.</p>



## C. Test Results: Account Establishment and Management Verification and Validation Review (RMI3)

### 1.0 Description

The Account Establishment and Management Verification and Validation Review evaluated aspects of Bell Atlantic-Massachusetts (BA-MA) policies and practices for establishing and managing account relationships with CLEC and Resale customers. The objectives of the test were to determine the adequacy and completeness of procedures for developing, publicizing, conducting, and monitoring Account Management. Interviews and documentation reviews were conducted to evaluate BA-MA's Account Establishment and Management Program.

### 2.0 Methodology

This section summarizes the test methodology.

#### 2.1 Business Process Description

The BA-MA Account Management teams serve as the primary points of contact within BA-MA for wholesale customers. Their responsibilities include introducing new customers to BA-MA products and services, distributing appropriate documentation and contact lists, communicating routine and emergency notifications to customers, scheduling and leading network planning meetings and interfacing with other BA-MA units.

#### 2.2 Scenarios

Scenarios were not applicable to this test.

#### 2.3 Test Targets & Measures

The test target was BA-MA's CLEC and Resale Account Management team. Processes, sub-processes, evaluation measures, and associated test cross-reference numbers are summarized in the following table. The last column, "Test Cross-Reference," indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

**Table 3-1: Test Target Cross-Reference**

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Establishing an Account Relationship	Staffing	Appropriate roles and responsibilities	RMI-3-1-1, RMI-3-1-3, RMI-3-1-4, RMI-3-2-1, RMI-3-2-2
Establishing an Account Relationship	Staffing	Capacity, coverage, and account allocation	RMI-3-1-2, RMI-3-2-2, RMI-3-2-3, RMI-3-2-4, RMI-3-2-6, RMI-3-2-7, RMI-3-2-8, RMI-3-2-9

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Maintaining an Account Relationship	Escalation	Adequacy and completeness of escalation procedures	RMI-3-1-6
Maintaining an Account Relationship	Communications	Compliance with pre-filing commitment for industry letters and conferences	RMI-3-1-5, RMI-3-1-7, RMI-3-2-5
Maintaining an Account Relationship	Communications	Adequacy and completeness of emergency communication and notifications	RMI-3-1-8, RMI-3-2-7, RMI-3-2-10
Documentation – CLEC Handbook(s)	Documentation development and distribution	Adequacy and completeness of CLEC Handbook(s) development and distribution procedures	RMI-3-3-2, RMI-3-3-3
Documentation – CLEC Handbook(s)	Document structure	Adequacy and completeness of CLEC Handbook(s) structure	RMI-3-3-1, RMI-3-3-4, RMI-3-3-5

#### 2.4 Data Sources

The data collected for the test are summarized in the table below.

**Table 3-2: Data Sources for Account Establishment and Management Verification and Validation Review**

Document	File Name	Location in Work Papers	Source
Bell Atlantic response to KPMG Consulting's Initial Data Request for Communications	Hard Copy	RMI-3-A-I-1	Bell Atlantic
Bell Atlantic response to KPMG Consulting's <i>Validation and Verification</i> letter for Communications	Hard Copy	RMI-3-A-I-2	Bell Atlantic
TIS Industry Correspondence Database	Hard Copy	RMI-3-A-I-3	Bell Atlantic

Document	File Name	Location in Work Papers	Source
Resale Customer Distribution List	Hard Copy	RMI-3-A-I-4	Bell Atlantic
CLEC Distribution Lists	Hard Copy	RMI-3-A-I-5	Bell Atlantic
Industry Mailing Distribution List	Hard Copy	RMI-3-A-I-6	Bell Atlantic
Bell Atlantic response to KPMG Consulting's Initial Data Request for CLEC Services	Hard Copy	RMI-3-A-I-7	Bell Atlantic
List of Bell Atlantic Account Managers and corresponding CLEC Account	Contactlist.xls	RMI-3-A-I-8	Bell Atlantic
TIS Organization CLECs/RESELLERS Account Management Responsibilities	Amresp21.doc	RMI-3-A-I-9	Bell Atlantic
Bell Atlantic response to KPMG Consulting's Interview Summary with Bell Atlantic's Director of Account Management	Rev_Horton_int_summ.doc	RMI-3-A-I-10	Bell Atlantic
Bell Atlantic response to KPMG Consulting's Interview Summary with Bell Atlantic's Director of Marketing and Business Planning	Rev_Jsmith_int_summ.doc	RMI-3-A-I-11	Bell Atlantic

Document	File Name	Location in Work Papers	Source
Test Results: Account Establishment and Management Verification and Validation Review (RMI3)	Hard Copy	RMI-3-A-I-12	Bell Atlantic
CLEC & Resale Handbook Process Binder (August 1999)	Hard Copy	RMI-3-B-I-1	Bell Atlantic
Bell Atlantic response to Process Validation – Bell Atlantic’s Director of Account Management	KPMGHorton_int_summ.doc	RMI-3-C-I-1	Bell Atlantic
Bell Atlantic response to Process Validation – Bell Atlantic’s Director of Marketing and Business Planning	Hard Copy	RMI-3-C-I-2	Bell Atlantic
Bell Atlantic – Massachusetts Master Test Plan Final Version 2.0 (November 24, 1999)	MA MTP Final Version 112499.pdf	RMI-3-A-II-13	KPMG Consulting
KPMG Consulting – Bell Atlantic Verification of Bell Atlantic - Massachusetts Account Management Processes with Bell Atlantic’s Director of Marketing and Business Planning	Rmi3_final_verif_JS.doc	RMI-3-A-II-14	KPMG Consulting

Document	File Name	Location in Work Papers	Source
KPMG Consulting – Bell Atlantic Verification of Bell Atlantic – Massachusetts Account Management Processes with Bell Atlantic’s Director of Account Management	Rmi3_final_verif.doc	RMI-3-A-II-15	KPMG Consulting
RMI3 Peer Review	Rmi3testpak.doc	RMI-3-A-II-16	KPMG Consulting
KPMG Consulting – Bell Atlantic Initial Data Request for CLEC	Smith_data_clec.doc	RMI-3-A-II-17	KPMG Consulting
KPMG Consulting – Bell Atlantic Initial Data Request for Communications	Smith_data_comm.doc	RMI-3-A-II-17	KPMG Consulting
KPMG Consulting – Bell Atlantic Initial Data Request for Resale	Smith_data_resale.doc	RMI-3-A-II-17	KPMG Consulting
KPMG Consulting – Bell Atlantic Validation and Verification letter for CLECs	Smith_verif_clec.doc	RMI-3-A-II-18	KPMG Consulting
KPMG Consulting – Bell Atlantic Validation and Verification letter for Communications	Smith_verif_comm.doc	RMI-3-A-II-18	KPMG Consulting
KPMG Consulting – Bell Atlantic Validation and Verification letter for Resellers	Smith_verif_resale.doc	RMI-3-A-II-18	KPMG Consulting

Document	File Name	Location in Work Papers	Source
KPMG Consulting – Bell Atlantic Interview Guide for Communications	Rmi3_int_guide.doc	RMI-3-A-II-19	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Guide for CLECs	Rmi3_int_guide2.doc	RMI-3-A-II-20	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Guide for Resale	Rmi3_int_guide3.doc	RMI-3-A-II-21	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Report with Bell Atlantic’s Director of Account Management	Rmi3_int_rpt.doc	RMI-3-A-II-22	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Report with Bell Atlantic’s Director of Marketing and Business Planning	Rmi3_int_rpt_JS.doc	RMI-3-A-II-23	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Summary with Bell Atlantic’s Director of Account Management	Horton_int_summ.doc	RMI-3-A-II-24	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Summary with Bell Atlantic’s Director of Marketing and Business Planning	Jsmith_int_summ.doc	RMI-3-A-II-25	KPMG Consulting
RMI3 Exit Peer Review Sign-off Letter	Hard Copy	RMI-3-C-3	KPMG Consulting

### 2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

### 2.5 Evaluation Methods

The Account Establishment processes and procedures were conducted using a series of interviews with BA-MA. A review of Bell Atlantic documentation, and the Bell Atlantic Wholesale Markets website was also conducted as part of the evaluation.

### 2.6 Analysis Methods

The Account Establishment and Management Verification and Validation Review included a checklist of evaluation criteria developed by the test manager during the initial phase of the Bell Atlantic-Massachusetts OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the Account Establishment and Management Verification and Validation Review.

The data collected were analyzed employing the evaluation criteria referenced above.

## 3.0 Results Summary

This section identifies the evaluation criteria and test results.

### 3.1 Results & Analysis

The results of this test are presented in the tables below.

**Table 3-3: RMI3 Evaluation Criteria and Results: Account Establishment and Management Procedural Evaluation Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-3-1-1	Account establishment and management responsibilities and activities are defined.	Satisfied	Account establishment and management responsibilities and activities are defined and documented in the internal "Account Management Responsibilities Guide." A brief outline is also published in the CLEC Handbook (March 2000, Volume I, Section 6.6) and Resale Handbook (September 1999, Volume I, Section 5.1).

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-3-1-2	Account management staff are organized to provide account coverage.	Satisfied	<p>The Bell Atlantic Account Management staff are aligned to cover customers on a per CLEC/Reseller basis.</p> <p>Bell Atlantic assigns each customer both a primary Account Manager and a backup. These two Account Managers work together to serve the customer. This is documented in the CLEC Handbook (March 2000, Volume I, Section 6.6) and Resale Handbook (September 1999, Volume I, Section 5.1).</p>
RMI-3-1-3	A complete description of the account establishment and management process is documented.	Satisfied	<p>The Account Establishment and Management process is described in the internal Bell Atlantic documentation "Account Management Responsibilities Guide." Additional documentation on the process can be found in the CLEC Handbook (March 2000, Volume I, Section 6.6) and Resale Handbook (September 1999, Volume I, Section 5.1).</p>
RMI-3-1-4	Instructions for contacting Account Managers are defined and published.	Satisfied	<p>Instructions for contacting Account Managers are defined in the CLEC Handbook (March 2000, Volume I, Section 6.6) and Resale Handbook (September 1999, Volume I, Section 5.1).</p> <p>Bell Atlantic Account Managers inform their customers of all possible contact means (cellular phone, pager, electronic mail, voice mail) for any inquiries. In the event a Bell Atlantic Account Manager is away for an extended duration, the Account Manager's voice mail is updated with the appropriate information to indicate this and provide an alternate Bell Atlantic Account Manager contact.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-3-1-5	Procedures for receiving, managing and resolving customer inquiries are defined.	Satisfied	<p>The procedures for receiving, managing, and resolving customer inquiries are defined in the internal Bell Atlantic document, “Account Managers Responsibilities Guide.”</p> <p>Each Bell Atlantic Account Manager maintains a current log that records the history of calls made back to the customer.</p>
RMI-3-1-6	Procedures for escalating critical, time-sensitive, and unresolved customer issues are defined.	Satisfied	<p>Procedures are defined in the internal Bell Atlantic document, “Account Managers Responsibilities Guide” on how Bell Atlantic Account Managers are to handle escalating, critical, time-sensitive, and unresolved customer issues.</p> <p>If a Bell Atlantic Account Manager is unable to provide a solution or answer to the CLEC/Reseller, the Account Manager will contact the proper Bell Atlantic subject matter expert(s) for assistance.</p>
RMI-3-1-7	Procedures for making routine, regular communications to customers are defined.	Satisfied	<p>Procedures for making routine, regular communications to customers are defined in internal Bell Atlantic documentation “Account Managers Responsibilities Guide.”</p> <p>Bell Atlantic Account Managers interact frequently with their customers through mediums such as phone calls and electronic mails. Some typical activities that the Bell Atlantic Account Managers perform for their customers are: providing them with updates to documents, responding to their questions, and dealing with any other immediate issues.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-3-1-8	Procedures for making emergency notifications and communications to customers are defined.	Satisfied	<p>The procedures for emergency notifications and communications of Account Management related issues are conducted through industry mailings and direct contact from the Bell Atlantic Account Managers.</p> <p>Notifications of emergencies and other messages related to the Bell Atlantic – CLEC Operation Support Systems interface are made through the Bell Atlantic Change Management process. The Bell Atlantic document “Change Management Notification Process (February 2000),” defines the procedures for CLEC notification under that environment.</p>

**Table 3-4: RMI3 Evaluation Criteria and Results: Account Establishment and Management Compliance Evaluation Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-3-2-1	Bell Atlantic Massachusetts developed a comprehensive account management guide describing the managers’ roles and responsibilities in the CLEC Handbook.	Satisfied	A description of the Bell Atlantic Account Managers’ roles and responsibilities is documented in the CLEC Handbook (March 2000, Volume I, Section 6.6) and Resale Handbook (September 1999, Volume I, Section 5.1).
RMI-3-2-2	Account Managers interact with other Bell Atlantic–Massachusetts units on the CLECs behalf for unbundled network elements (UNEs) and resold services.	Satisfied	Bell Atlantic Account Managers act as customer advocates when interacting with other Bell Atlantic departments. The CLEC Handbook (March 2000, Volume I, Section 6.6) and Resale Handbook (September 1999, Volume I, Section 5.1), and internal Bell Atlantic documentation “Account Management Responsibilities Guide,” describe how Bell Atlantic Account Managers interact with other Bell Atlantic units on the customer’s behalf.

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-3-2-3	Bell Atlantic-Massachusetts has formal procedures for Account Manager coverage in the event that Account Managers are absent from the office for more than one day for vacation, illness, training and similar occurrences.	Satisfied	Formal procedures and documents exist for Bell Atlantic Management coverage. This procedure is documented in the CLEC Handbook (March 2000, Volume I, Section 6.6) and Resale Handbook (September 1999, Volume I, Section 5.1). Absent Bell Atlantic Account Managers are required to update their voice mail greeting message indicating their absence and refer the caller to another Bell Atlantic Account Manager who is a designated backup.
RMI-3-2-4	BA-MA designates and notifies each customer about its alternate Account Managers.	Satisfied	In the absence of the designated Bell Atlantic Account Manager the voice message recording will provide the contact details of an alternate Bell Atlantic Account Manager. As well, the Bell Atlantic Account Manager may contact the CLEC directly in advance of an extended period absence. Procedures for handling alternate Bell Atlantic Account Manager contacts are documented in the CLEC Handbook (March 2000, Volume I, Section 6.6).
RMI-3-2-5	Account Manager responsibilities are posted on the Bell Atlantic Wholesale Markets website.	Satisfied	Bell Atlantic Account Manager responsibilities are posted on the Bell Atlantic Wholesale Markets website ( <a href="http://www.bellatlantic.com/wholesale/html/handbooks/clec/volume_1/cls6_6.htm">http://www.bellatlantic.com/wholesale/html/handbooks/clec/volume_1/cls6_6.htm</a> ).
RMI-3-2-6	Account Managers are appropriately equipped to receive communications by electronic mail, phone and page.	Satisfied	The reporting Director for the respective Bell Atlantic Account Managers have verified through an interview with KPMG Consulting that all Bell Atlantic Account Managers can be reached by electronic mail, cellular phone, voicemail, and pager.

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-3-2-7	Procedures are formalized to return customer calls on the day in which they are received if the Account Manager is in the office, but in no event later than the next business day.	Satisfied	Bell Atlantic Account Managers follow the “Same Day” call return policy which requires calling the customer back within the same business day if in the office. When a Bell Atlantic Account Manager is out of the office the day of the original call, that call must be returned by the next business day. The internal Bell Atlantic document, “Account Management Responsibilities Guide” describes the “Same Day” call return policy.
RMI-3-2-8	Performance measures are utilized in allocating Account Managers and evaluating when to add Account Managers.	Satisfied	Bell Atlantic utilizes performance measurements to assist in determining staffing requirements. Some of these measurements include the number of accounts, geographical coverage of accounts, and the number of calls returned within one business day. This information is documented in the “Account Management Responsibilities Guide.”
RMI-3-2-9	Account Managers will sponsor and actively participate in user groups for facilities-based CLECs.	Satisfied	Account Managers sponsor and participate in various CLEC user groups.
RMI-3-2-10	BA-MA defines and complies with notification intervals to CLECs for internal Bell Atlantic maintenance.	Satisfied	Notification intervals to CLEC/Resellers for internal Bell Atlantic maintenance is posted on the Bell Atlantic Wholesale Markets website ( <a href="http://www.bellatlantic.com/wholesale/html/pdfs/cm522t1s1.pdf">http://www.bellatlantic.com/wholesale/html/pdfs/cm522t1s1.pdf</a> ). Furthermore, this information is communicated to customers through industry mailings.

**Table 3-5: RMI3 Evaluation Criteria and Results: Account Establishment  
and Management Documentation Evaluation Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-3-3-1	Responsibilities and procedures for developing, updating, and correcting documentation are defined.	Satisfied	<p>The responsibilities for developing, updating, and correcting documentation are defined within Bell Atlantic. The Wholesale Markets Communications and Support group has the overall responsibilities for developing, updating and correcting documentation to the CLEC and Resale Handbooks.</p> <p>Bell Atlantic subject matter experts review the content and an executive team confirms the accuracy of the Handbooks and performs a final review.</p>
RMI-3-3-2	Responsibilities and procedures for maintaining distribution lists and distributing documentation are defined.	Satisfied	<p>The responsibilities for maintaining the distribution list and procedures for distributing documentation are defined.</p> <p>The distribution lists are owned and maintained by the Wholesale Markets Communications and Support team. Bell Atlantic Account Managers will provide new or updated customer profiles to the team as required.</p> <p>Industry mailings are made available through the Bell Atlantic Wholesale Markets website (<a href="http://bellatlantic.com/wholesale/html/resources.htm">http://bellatlantic.com/wholesale/html/resources.htm</a>), physical mail, and electronic notification.</p> <p>New CLEC and Resale Handbook releases are available on the Bell Atlantic Wholesale Markets website and on CD-ROM.</p>
RMI-3-3-3	Distribution procedures allows latest document version to be made available to interested parties in electronic and paper versions as soon as they are complete.	Satisfied	<p>The latest versions of the CLEC/Resale Handbooks are made available on the Bell Atlantic Wholesale Markets website (<a href="http://www.bellatlantic.com/wholesale/html/customer_doc.htm">http://www.bellatlantic.com/wholesale/html/customer_doc.htm</a>).</p> <p>Customers are notified of any new releases through industry mailings of new releases. For customers that have installed the CD-ROM version of the CLEC/Resale Handbook, the installed software will automatically check for updates to the Handbooks.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-3-3-4	Training is provided for use of documentation.	Satisfied	Informal training or guidance is provided by Bell Atlantic Account Managers to users who may have questions about documentation.
RMI-3-3-5	BA-MA documentation is organized in a manner that makes information accessible to CLECs.	Satisfied	<p>Bell Atlantic documentation is organized in an accessible manner. The CLEC/Resale Handbooks are structured to have a table of contents and glossaries. Furthermore, the online versions of the CLEC and Resale Handbooks contain hyperlinks that allow users to quickly navigate through the documents.</p> <p>Users may also execute the online “Search” option on the Bell Atlantic Wholesale Markets website.</p>

## **D. Test Results: Account Establishment and Management Performance Data Review (RMI4)**

### **1.0 Description**

The purpose of the Account Establishment and Management Performance Data Review is to evaluate Bell Atlantic-Massachusetts (BA-MA) Account Management responsiveness in returning calls. This test relied upon historical data supplied by BA-MA to measure compliance with call return procedures (as previously evaluated in RMI3).

### **2.0 Methodology**

This section summarizes the test methodology.

#### **2.1 Business Process Description**

The BA-MA Account Management teams serve as the primary points of contact within BA-MA for wholesale (both CLEC and Resale) customers. Account Managers maintain individual logs of customer calls received.

All Account Managers submit weekly Call Logs to their Director which show the number of incoming calls and the number of calls returned the same day, the next business day, and later than one business day.

#### **2.2 Scenarios**

Scenarios were not applicable to this test.

#### **2.3 Test Targets & Measures**

The test target was Bell Atlantic's CLEC and Resale Account Management teams. Processes, sub-processes, evaluation measures, and associated test cross-reference numbers are summarized in the following table. The last column, "Test Cross-Reference," indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

**Table 4-1: Test Target Cross-Reference**

<b>Process</b>	<b>Sub-Process</b>	<b>Evaluation Measure</b>	<b>Test Cross-Reference</b>
Maintaining an Account Relationship	Respond to account inquiry/requests for assistance	Timeliness of response	RMI-4-1, RMI-4-2

## 2.4 Data Sources

The data collected for the test are summarized in the table below.

**Table 4-2: Data Sources for Account Establishment and Management Performance Data Review**

Document	File Name	Location in Work Papers	Source
TIS Organization CLECs/Resellers Account Management Responsibilities	Amresp21.doc	RMI-4-A-I-1	Bell Atlantic
Weekly call logs for BA-MA Account Managers	Hard Copy	RMI-4-A-I-2	Bell Atlantic
Bell Atlantic-Massachusetts OSS Master Test Plan Final Version 2.0 (November 24, 1999)	MA MTP Final Version 112499.pdf	RMI-4-A-II-3	KPMG Consulting
RMI4 Peer Review	Rmi4testpak.doc	RMI-4-A-II-4	KPMG Consulting
KPMG Consulting – Bell Atlantic Initial Data Request for CLEC	Smith_data_clec.doc	RMI-4-A-II-5	KPMG Consulting
KPMG Consulting – Bell Atlantic Initial Data Request for Resale	Smith_data_resale.doc	RMI-4-A-II-6	KPMG Consulting
BA-MA Account Management and System Support Help Desk CLEC Questionnaire	Rmisurvey.doc	RMI-4-A-II-7	KPMG Consulting
Test Results: Account Establishment and Management Performance Data (RMI4)	Hard Copy	RMI-4-A-II-8	KPMG Consulting

Document	File Name	Location in Work Papers	Source
RMI4 Exit Peer Review Sign-off Letter	Hard Copy	RMI-4-A-II-9	KPMG Consulting

#### 2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

#### 2.5 Evaluation Methods

The BA-MA Account Establishment and Management Performance Data Review evaluation was conducted using a series of interviews with BA-MA. Additional data was received from BA-MA, and KPMG Consulting analyzed the information gathered from the interviews and data.

#### 2.6 Analysis Methods

The Account Establishment and Management Performance Data Review included a checklist of evaluation criteria developed by the test manager during the initial phase of the Bell Atlantic-Massachusetts OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the Account Establishment and Management Performance Data Review.

The data collected were analyzed employing the evaluation criteria referenced above.

### 3.0 Results Summary

This section identifies the evaluation criteria and test results.

#### 3.1 Results & Analysis

The results of this test are presented in the tables below.

**Table 4-3: RMI4 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-4-1	Customer calls are returned on the same day in which they are received when the Account Manager is in the office and no later than the next business day.	Satisfied	From October 1999 to December 1999, 95.5% of customer calls were returned on the same day, 4.3% no later than the next business day, and 0.2% greater than one business day.

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-4-2	Customer calls will be returned no later than the following business day in the even that an Account Manager is out of the office.	Satisfied	From October 1999 to December 1999, 98% of customer calls were returned within one business day, and 2% greater than one business day.

**Table 4-4: RMI4 Evaluation Criteria Results:  
Number of Calls Returned**

Account Manager	Same Day	Next Business Day	After 2 Business Days
Account Manager (Days in Office)	8723	393	14
Account Manager (Days Out of Office)	202	21	4

## **E. Test Results: Network Design Request (NDR), Collocation, and Interconnection Planning Verification and Validation Review (RMI5)**

### **1.0 Description**

This review evaluated aspects of the Bell Atlantic-Massachusetts (BA-MA) Network Design Request (NDR) process, collocation, and interconnection planning procedures.

The NDR process allows a CLEC to establish a presence in a Bell Atlantic switch, that is, when a CLEC requires Bell Atlantic to provide dial tone from a Bell Atlantic switch port. Collocation is currently the only manner for a CLEC to gain access to local loop Unbundled Network Elements (UNEs).

This test did not examine interconnection for other purposes such as at a network to network level (for example with an interexchange carrier).

### **2.0 Methodology**

This section summarizes the test methodology.

#### **2.1 Business Process Description**

BA-MA provides NDR, collocation, and interconnection planning services to facilities-based local exchange carriers in order to support the provisioning of UNEs.

*NDR:* The purpose of the NDR process is to gather information related to a CLEC's desired service offerings, jointly determine the definitive criteria for a detailed design for establishing a CLEC's presence in BA-MA's network, and initiate the process of establishing CLEC services. These CLEC services are based upon desired product offerings, which includes determining collocation and trunk requirements, operator services, and billing. BA-MA assigns a Service Delivery Engineer (SDE) to coordinate NDR activities with a CLEC.

*Collocation and Interconnection:* Collocation is required for CLECs wishing to offer UNE services such as local loop and interoffice facilities in Massachusetts. A collocation can take two general forms - virtual and physical:

A virtual collocation consists of a CLEC providing and transferring ownership of telecommunication equipment to BA-MA for a nominal monetary amount. BA-MA then provisions, maintains, and repairs the equipment only on instructions from the CLEC. The CLEC provisions and maintains the equipment remotely. The physical gear is located in BA-MA's own equipment lineups but that equipment is dedicated to the CLEC's use. The CLEC does not have physical access to the equipment.

In general, physical collocation provides a secure area in a central office for the CLEC to own, install, maintain, and administer its own telecommunications equipment. Unlike virtual collocation, the CLEC has direct physical access to its equipment. There are a number of variations of physical collocation such as Secured Collocation Open Physical Environment (SCOPE) and Cageless Collocation – Open Physical Environment (CCOE).

## 2.2 Scenarios

Scenarios were not applicable to this test.

## 2.3 Test Targets & Measures

The test target was BA-MA's NDR, collocation, and interconnection planning processes. Processes, sub-processes, evaluation measures, and associated test cross-reference numbers are summarized in the following table. The last column, "Test Cross-Reference," indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

**Table 5-1: Test Target Cross-Reference**

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Network Design Request	Preparation for NDR meetings	Usability and completeness of NDR forms	RMI-5-1-1, RMI-5-1-2, RMI-5-1-3, RMI-5-1-4, RMI-5-1-11
Network Design Request	NDR meetings	Adequacy and completeness of process	RMI-5-1-1, RMI-5-1-2, RMI-5-1-3, RMI-5-1-4, RMI-5-1-5, RMI-5-1-6, RMI-5-1-7, RMI-5-1-8, RMI-5-1-9, RMI-5-1-10
Collocation	Collocation requirements forecasting	Usability and completeness of collocation forecast forms	See RMI10
Collocation	Evaluation of collocation establishment process	Adequacy and completeness of process	RMI-5-2-1, RMI-5-2-2, RMI-5-2-3, RMI-5-2-4, RMI-5-2-5, RMI-5-2-6, RMI-5-2-7, RMI-5-2-8, RMI-5-2-9, RMI-5-2-10, RMI-5-2-11, RMI-5-2-12, RMI-5-2-13, RMI-5-2-14, RMI-5-2-15, RMI-5-2-16, RMI-5-2-17
Collocation	Forecast analysis	Availability of results to the Department of Telecommunications and Energy and CLECs	See RMI10

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Interconnection Planning	Interconnection planning information requirements	Completeness and usability of instructions for preparing for the Interconnection Planning meeting	RMI-5-2-2, RMI-5-2-3, RMI-5-2-14
Interconnection Planning	Evaluation of Interconnection Planning process	Adequacy and completeness of process	RMI-5-2-1, RMI-5-2-2, RMI-5-2-3, RMI-5-2-4, RMI-5-2-5, RMI-5-2-6, RMI-5-2-7, RMI-5-2-8, RMI-5-2-9, RMI-5-2-10, RMI-5-2-11, RMI-5-2-12, RMI-5-2-13, RMI-5-2-15, RMI-5-2-16, RMI-5-2-17

#### 2.4 Data Sources

The data collected for the test are summarized in the tables below.

**Table 5-2: Data Sources for Network Design Request Verification and Validation Review**

Document	File Name	Location in Work Papers	Source
UNE-P Line Class Code (LCC) Test Call Types	NELCCs.xls	RMI-5-1-A-I-1	BA-MA
Local Access Transport Area (LATA) Unbundled test call log	TestNEALL.xls	RMI-5-1-A-I-2	BA-MA
Bell Atlantic Network Design Request (NDR) Test Process	TestLetterNE.doc	RMI-5-1-A-I-3	BA-MA
Bell Atlantic Network Design Request (NDR) Test Process	TestletNE2.doc	RMI-5-1-A-I-4	BA-MA
OLNS/SPID flow diagram	ndrspid.ppt	RMI-5-1-A-I-5	BA-MA

Document	File Name	Location in Work Papers	Source
Bell Atlantic NDR Contact List	NDRContacts.doc	RMI-5-1-A-I-6	BA-MA
Telecom Industry Services Operations Center (TISOC) Method and Procedure for Network Design Request (NDR) (September 28, 1999)	ndrstand-Process.doc	RMI-5-1-A-I-7	BA-MA
TISOC Methods and Procedures – Network Design Request, Various Forms	NDR_Exhibits.doc	RMI-5-1-A-I-8	BA-MA
Operator Services Questionnaire for Unbundled Telecommunications Carriers, BA-North (Revised November 4, 1999)	Osqno1199.doc	RMI-5-1-A-I-9	BA-MA
Facilities Based and Unbundler's Customer Profile Form Account Establishment	c1s8_5_7.pdf	RMI-5-1-A-I-10	BA-MA
Operator Services Questionnaire for Unbundled Telecommunications Carriers Bell Atlantic-South (Except NJ)	NDROS_southquest.doc	RMI-5-1-A-I-11	BA-MA
Line Class Code Provisioning Form, LATA Presence Form, Operator Services Questionnaire (Bell Atlantic-North and South)	c1s8_5_8.pdf	RMI-5-1-A-I-12	BA-MA
NDR Tracking Database extract	Hard Copy	RMI-5-1-A-I-13	BA-MA

Document	File Name	Location in Work Papers	Source
Bell Atlantic NDR Process North and South Organization Chart	Hard Copy	RMI-5-1-A-I-14	BA-MA
Operator Services Questionnaire for Unbundled Telecommunications Carriers Bell Atlantic-South (Except New Jersey) (Revised November 4, 1999)	osqso1199.doc	RMI-5-1-A-I-15	BA-MA
Ordering Billing Forum (OBF) Translation Questionnaire (TQ) Form Preparation Guide	c1s8_5_11.pdf	RMI-5.1-A-I-16	BA-MA
KPMG Consulting Exception No.20, New York OSS Test	x20.pdf	RMI-5-1-A-I-17	KPMG Consulting
BA-NY Response to Exception No.20, New York OSS Test	x20r.pdf	RMI-5-1-A-I-18	KPMG Consulting
KPMG Consulting Exception Closure Report for Exception No. 20, New York OSS Test	x20z.pdf	RMI-5-1-A-I-19	KPMG Consulting
Competitive Local Exchange Carrier Questionnaire for the Provisioning of Intra-LATA Call Completion Operator Services and Directory Assistance Services	c1s8_5_13.pdf	RMI-5-1-A-I-20	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part B, Section 6, Issued: April 21, 2000, Effective: May 21, 2000	b_sec6.pdf	RMI-5-1-A-I-21	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part B, Section 8, Issued: April 21, 2000, Effective: May 21, 2000	b_sec8.pdf	RMI-5-1-A-I-22	BA-MA

Document	File Name	Location in Work Papers	Source
DTE MA No. 17, Miscellaneous Network Services, Part B, Section 9, Issued: April 21, 2000, Effective: May 21, 2000	b_sec9.pdf	RMI-5-1-A-I-23	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part B, Section 15, Issued: April 21, 2000, Effective: May 21, 2000	b_sec15.pdf	RMI-5-1-A-I-24	BA-MA
Master Test Plan, November 24, 1999, Version 2.0, Section V, Excerpt for RMI5, pgs. 145-148	MA MTP Final Version 112499.pdf	RMI-5-1-B-II-1	KPMG Consulting
Peer Review Signoff Letter	Hard Copy	RMI-5-1-B-II-2	KPMG Consulting
RMI5 Test Pack	rmi5testpak.doc	RMI-5-1-B-II-3	KPMG Consulting
Verification Review	rmi5.1verif.doc	RMI-5-1-B-II-4	KPMG Consulting
KPMG Consulting NDR data request (January 7, 2000)	lefevredatareq.doc	RMI-5-1-B-II-5	KPMG Consulting
KPMG Consulting NDR verification and validation letter (January 10, 2000)	lefevre_verif.doc	RMI-5-1-B-II-6	KPMG Consulting
KPMG Consulting verification and validation letter	lefevre_verif2.doc	RMI-5-1-B-II-7	KPMG Consulting
Bell Atlantic NDR Product Manager interview report	yeeintrep.doc	RMI-5-1-B-II-8	KPMG Consulting
Bell Atlantic NDR Product Manager interview summary (KPMG Consulting original)	yeeintsum.doc	RMI-5-1-B-II-9	KPMG Consulting

Document	File Name	Location in Work Papers	Source
Bell Atlantic NDR Product Manager letter with interview summary changes	Hard Copy	RMI-5-1-B-II-10	KPMG Consulting
Bell Atlantic Product Manager interview report	dardenintrep.doc	RMI-5-1-B-II-11	KPMG Consulting
Bell Atlantic Product Manager interview summary (KPMG Consulting original)	dardenintsum.doc	RMI-5-1-B-II-12	KPMG Consulting
Bell Atlantic Product Manager interview summary with Bell Atlantic comments	KPMG Consultinginterview.doc	RMI-5-1-B-II-13	BA-MA
Bell Atlantic Director Software Provisioning interview report	diricointrep.doc	RMI-5-1-B-II-14	KPMG Consulting
Bell Atlantic Director Software Provisioning interview summary (KPMG Consulting original)	000131diricointsum.doc	RMI-5-1-B-II-15	KPMG Consulting
Bell Atlantic Director Software Provisioning interview summary response	NDR Rocco DiRico Response.doc	RMI-5-1-B-II-16	BA-MA
Bell Atlantic NDR Manager interview report	lefevreintrep.doc	RMI-5-1-B-II-17	KPMG Consulting
Bell Atlantic NDR Manager interview summary (KPMG Consulting original)	000124lefevreintsum.doc	RMI-5-1-B-II-18	KPMG Consulting
Bell Atlantic NDR Manager interview summary response	991103lefevreintsum.doc	RMI-5-1-B-II-19	BA-MA
Bell Atlantic response to KPMG Consulting data request (February 24, 2000)	lefevredatreqresp.doc	RMI-5-1-B-II-20	BA-MA

Document	File Name	Location in Work Papers	Source
Bell Atlantic NDR Manager response to KPMG Consulting verification and validation letter (January 14, 2000)	January 14.doc	RMI-5-1-B-II-21	BA-MA
KPMG Consulting/BA-MA interview summary for Massachusetts Software Provisioning (SPC) Center	Hard Copy	RMI-5-1-B-II-22	KPMG Consulting
State of New York Department of Public Service, Bell Atlantic OSS Evaluation Project, Final Report, Version 2.0, August 6, 1999, Excerpt pgs. VII-59 to VII-76	Hard Copy	RMI-5-1-B-II-23	KPMG Consulting
Telephone log	Hard Copy	RMI-5-1-B-II-24	KPMG Consulting
Exit Peer Review Signoff Letter	Hard Copy	RMI-5-1-B-II-25	KPMG Consulting
CLEC 1 Data (Proprietary)	Hard Copy	RMI-5-1-C-III-1	KPMG Consulting
CLEC 2 Data (Proprietary)	Hard Copy	RMI-5-1-C-III-2	KPMG Consulting
CLEC 3 Data (Proprietary)	Hard Copy	RMI-5-1-C-III-3	KPMG Consulting

**Table 5-3: Data Sources for Collocation and Interconnection Planning Verification and Validation Review**

Document	File Name	Location in Work Papers	Source
Virtual collocation project sequence	Hard Copy	RMI-5-2-A-I-1	BA-MA

Document	File Name	Location in Work Papers	Source
Physical collocation project sequence	Hard Copy	RMI-5-2-A-I-2	BA-MA
Collocation application to turn-up process	Hard Copy	RMI-5-2-A-I-3	BA-MA
SCOPE – Secured Open Physical Environment Massachusetts – Department of Telecommunications and Energy (DTE) 17 (Working Draft, June 16, 1999)	Scoped~1.doc	RMI-5-2-A-I-4	BA-MA
Sample Bell Atlantic collocation form letters	Hard Copy	RMI-5-2-A-I-5	BA-MA
Physical collocation SPAN Connection Facility Assignment (CFA) information	Hard Copy	RMI-5-2-A-I-6	BA-MA
Physical Colo Voice Grade Termination Matrix, Final March 1999	Hard Copy	RMI-5-2-A-I-7	BA-MA
Providing the Manual DSX for Collocation (February 22, 1999)	Hard Copy	RMI-5-2-A-I-8	BA-MA
Providing the Fiber POT for Physical Collocation – Common Area Guidelines & Procedures	Hard Copy	RMI-5-2-A-I-9	BA-MA
Physical Collocation Acceptance Checklist	Hard Copy	RMI-5-2-A-I-10	BA-MA
Collocation Forecast Template Instructions (February 1, 1999)	Hard Copy	RMI-5-2-A-I-11	BA-MA

Document	File Name	Location in Work Papers	Source
VENDOR REQUIREMENTS – Physical, Cageless & SCOPE Pre-Acceptance Checklist	PROCESS – Physical Cageless SCOPE Collocation Pre-Acceptance Checklist.doc	RMI-5-2-A-I-12	BA-MA
Network Equipment Installation Standards, Information Publication 72201 (September 1998)	Hard Copy	RMI-5-2-A-I-13	BA-MA
Physical, Cageless, SCOPE Collocation Pre-Acceptance Checklist	FORM – Physical Cageless SCOPE Collocation Pre-Acceptance Checklist.doc	RMI-5-2-A-I-14	BA-MA
Physical, Cageless, SCOPE Collocation Pre-Acceptance Checklist (Process)	PROCESS – Physical Cageless SCOPE Collocation Pre-Acceptance Checklist.doc	RMI-5-2-A-I-15	BA-MA
Collocation checklist	questions.xls	RMI-5-2-A-I-16	BA-MA
Physical Collocation Acceptance Checklist	Hard Copy	RMI-5-2-A-I-17	BA-MA
Installation of the DS-3 Panels for Physical Collocation	Hard Copy	RMI-5-2-A-I-18	BA-MA
Collocation Guidelines	colosec_web.pdf	RMI-5-2-A-I-19	BA-MA
Collocation Queue Process	Hard Copy	RMI-5-2-A-I-20	BA-MA
NEBS Requirements (RNSA-NEB-95-0003, Rev. 10), Issued: January 26, 2000	nebs_inf.doc	RMI-5-2-A-I-21	BA-MA
Bell Atlantic Real Estate CLEC Cage Construction Standards	Hard Copy	RMI-5-2-A-I-22	BA-MA

Document	File Name	Location in Work Papers	Source
Bell Atlantic Collocation Application Form (March 1, 2000)	res_col_ap.doc	RMI-5-2-A-I-23	BA-MA
Bell Atlantic Collocation Application Instructions	Hard Copy	RMI-5-2-A-I-24	BA-MA
Bell Atlantic Collocation Space Summary	Hard Copy	RMI-5-2-A-I-25	BA-MA
TISOC Method and Procedure, New England CLEC Collocation, December 14, 1999, Working Draft	NE Colloc. DTE17 Plus.doc	RMI-5-2-B-I-1	BA-MA
Mechanized Loop Assignment Center (MLAC)/CPC Support Method of Procedure, Bell Atlantic-North CPC Procedures for Special Service Format Unbundled Network Elements and Collocation, April 30, 1999, Issue 2.8	ELEMETHSS 2.8.doc	RMI-5-2-B-I-2	BA-MA
Bell Atlantic Network Equipment Building Standard (NEBS) Product List (as of April 1, 2000)	Hard Copy	RMI-5-2-B-I-3	BA-MA
Extract from Collocation Customer Caller database (as of January 14, 2000)	KPMGRpt.xls	RMI-5-2-B-I-4	BA-MA
Access Card Contacts	Access Card Contacts.doc	RMI-5-2-B-I-5	BA-MA
Performance Measurement Options	CCC Performance Measurement Options.ppt	RMI-5-2-B-I-6	BA-MA
Collocation Customer Care flowchart	CCC Process Flows.ppt	RMI-5-2-B-I-7	BA-MA

Document	File Name	Location in Work Papers	Source
Collocation Customer Care Overview Presentation (Clerical Staff)	Clerical Training.ppt	RMI-5-2-B-I-8	BA-MA
Collocation Customer Care Dispatcher Binder Table of Contents	Customer Care TOC_Dispatcher version.doc	RMI-5-2-B-I-9	BA-MA
Collocation Customer Care Specialist Binder Table of Contents	Customer Care TOC_Manager version.doc	RMI-5-2-B-I-10	BA-MA
Dispatcher Job Aid	Dispatcher_Job Aid.ppt	RMI-5-2-B-I-11	BA-MA
Help Desk Tracking System Change Request Form	Forms for a Help Desk.doc	RMI-5-2-B-I-12	BA-MA
Unannounced Government Site Visit Job Aid	Govt. Site Visit_Job Aid.doc	RMI-5-2-B-I-13	BA-MA
Building Access Issues Job Aid	Hardcopy Building Access Issues_Job Aid.doc	RMI-5-2-B-I-14	BA-MA
Central Office – Cage Violation Issues Job Aid	Hardcopy CO Issues_Job Aid.doc	RMI-5-2-B-I-15	BA-MA
Security Breach Issues Job Aid	Hardcopy Security Breaches_Job Aid.doc	RMI-5-2-B-I-16	BA-MA
Help Desk Tracking System, Administration Guide	HDTS-AdminGuide-Form.xls	RMI-5-2-B-I-17	BA-MA
Help Desk Tracking System Administrator's Guide, Introduction	HDTS-AdminGuide-Intro.doc	RMI-5-2-B-I-18	BA-MA
Collocation Customer Care Required Roles	Help Desk Roles.doc	RMI-5-2-B-I-19	BA-MA

Document	File Name	Location in Work Papers	Source
Collocation Customer Care Overview Presentation (Management)	Manager Training.ppt	RMI-5-2-B-I-20	BA-MA
Collocation Customer Care Organization	Picture of Help Desk Floor Plan.ppt	RMI-5-2-B-I-21	BA-MA
New Hire Proficiency Tracking Sheet	Proficiency Document.ppt	RMI-5-2-B-I-22	BA-MA
Unannounced Government Site Visit Job Aid	Unannounced Government Site Visit_Job Aid.doc	RMI-5-2-B-I-23	BA-MA
Application Process flow	AP Process Flows.pps	RMI-5-2-B-I-24	BA-MA
Issues/Requests that will be Handled by the Collocation Customer Care (CCC)	CCC Handling List.doc	RMI-5-2-B-I-25	BA-MA
CLEC Contact List by Project Manager	CLEC List by Project Manager as of 0805.xls	RMI-5-2-C-I-1	BA-MA
Collocation Customer Care Overview Presentation	Clerical Training.pps	RMI-5-2-C-I-2	BA-MA
Definition of Key Terms and Issues Job Aid (Draft)	Definition of Terms and Issues_Job Aid.doc	RMI-5-2-C-I-3	BA-MA
Dispatcher Job Aid	Dispatcher_Job Aid.pps	RMI-5-2-C-I-4	BA-MA
Due Date Estimation Matrix and Results	Due Date Matrix.xls	RMI-5-2-C-I-5	BA-MA
Frequently Asked Questions Template	FAQs_Job Aid.doc	RMI-5-2-C-I-6	BA-MA

Document	File Name	Location in Work Papers	Source
Instructions for Editing a HDTS Attachment	HDTS Attachments Instructions.doc	RMI-5-2-C-I-7	BA-MA
Building Access Issues Job Aid	HDTS Building Access Issues_Job Aid.pps	RMI-5-2-C-I-8	BA-MA
Central Office Issues Job Aid	HDTS CO Issues_Job Aid.pps	RMI-5-2-C-I-9	BA-MA
Security Breach Issues Job Aid	HDTS Security Breach Issues_Job Aid.pps	RMI-5-2-C-I-10	BA-MA
Help Desk Tracking System – User Guide Training Material	HDTS- User Guide.xls	RMI-5-2-C-I-11	BA-MA
Help desk Tracking System – Administration Guide	HTS-AdminGuide-Views.doc	RMI-5-2-C-I-12	BA-MA
Customer Satisfaction Survey Results Tracking Spreadsheet	Help Desk Customer Satisfaction Survey Results.xls	RMI-5-2-C-I-13	BA-MA
Information CLECs Should Already Have	Information at CLECs Disposal.doc	RMI-5-2-C-I-14	BA-MA
Local Collocation Coordinator Contact List	LCC_Contact List as of 8_99.xls	RMI-5-2-C-I-15	BA-MA
Collocation Customer Care Presentation	Manager Training.pps	RMI-5-2-C-I-16	BA-MA
Network Operations Center Telephone Numbers	NOC Numbers.doc	RMI-5-2-C-I-17	BA-MA
Bell Atlantic-North Central Office Personnel Organization Chart	North CO Personnel Contact List.pps	RMI-5-2-C-I-18	BA-MA

Document	File Name	Location in Work Papers	Source
Real Estate Issues Job Aid	Real Estate Issue_Job Aid.doc	RMI-5-2-C-I-19	BA-MA
Bell Atlantic-Real Estate Customer Service Center (RECSC)	RECSC.doc	RMI-5-2-C-I-20	BA-MA
Dispatcher Phone Script	Script_Job Aid.pps	RMI-5-2-C-I-21	BA-MA
Bell Atlantic Collocation Check List	AP Process Checklist.doc	RMI-5-2-C-I-22	BA-MA
Bell Atlantic Central Office Organization Chart and Contact List	North CO Personnel List2.ppt	RMI-5-2-C-I-23	BA-MA
SCOPE – Secured Open Physical Environment Massachusetts – DTE 17 (Working Draft, June 16, 1999)	Scoped~1.doc	RMI-5-2-C-I-24	BA-MA
Bell Atlantic-Massachusetts Secured Collocation Open Physical Environment, Service Description, March 19, 1999, Version 1.03	Scopem~1.doc	RMI-5-2-C-I-25	BA-MA
NYNEX Network & Technology Planning, Virtual Collocation under Section 251, Summary Requirements, Technical Description 2.1	Hard Copy	RMI-5-2-D-I-1	BA-MA
Method and Procedure Release, PRE and Assurance, Collocation-Cage to Cage	Hard Copy	RMI-5-2-D-I-2	BA-MA
Instructions for Completing LFACS Cable Form	Hard Copy	RMI-5-2-D-I-3	BA-MA

Document	File Name	Location in Work Papers	Source
LFACS Cable Form (Feeder) for Physical & Virtual Collocation	Hard Copy	RMI-5-2-D-I-4	BA-MA
New Services Technology, Technical Description NST G98-020, January 2000, Issue 2, Secured Collocation Open Physical Environment	nstg98020Issue2.doc	RMI-5-2-D-I-5	BA-MA
Dedicated Transit Service (DTS) Massachusetts – DTE 17 (Working Draft, June 16 1999)	Dtscsa~2.doc	RMI-5-2-D-I-6	BA-MA
Dedicated Transit Service (DTS) (PIU 000)	DTScage.rtf	RMI-5-2-D-I-7	BA-MA
Virtual Collocation, Negotiation Methods	virtual 899 MP.doc	RMI-5-2-D-I-8	BA-MA
Virtual Collocation, Massachusetts – DTE 17 (Working Draft, June 16, 1999)	Virtua~6.doc	RMI-5-2-D-I-9	BA-MA
Bell Atlantic Virtual Collocation Service Description, Massachusetts DTE 17, March 19, 1999, Version 1.03	Virtua~3.doc	RMI-5-2-D-I-10	BA-MA
Method & Procedure Release, PRE and Assurance, Customer Operations, Virtual Collocation, Working Draft, Doc. No. 097-A 053, November 10, 1997, Reissue: February 2000	VRTCOLMP.doc	RMI-5-2-D-I-11	BA-MA
Physical Collocation, DTE 17 (Working Draft, June 16, 1999)	Physdt~1.doc	RMI-5-2-D-I-12	BA-MA

Document	File Name	Location in Work Papers	Source
Bell Atlantic Physical Collocation Service Description, Massachusetts DTE 17, March 19, 1999, Version 1.03	Phys-m~1.doc	RMI-5-2-D-I-13	BA-MA
Bell Atlantic-North Central Office Space Availability (as of April 7, 2000)	weba_no.pdf	RMI-5-2-D-I-14	BA-MA
Bell Atlantic-Massachusetts Central Office Floor Space Availability (as of March 31, 2000)	ma_coll.pdf	RMI-5-2-D-I-15	BA-MA
Method and Procedure Release, Network Operations Center (NOC) Implementation and Dispatch Process, Working Draft, Reissue February 2000, Doc. No. 97A-003, Dedicated Transit Service	Coloc2c.doc	RMI-5-2-D-I-16	BA-MA
Dispatcher Phone Script	Script_Job Aid.ppt	RMI-5-2-D-I-17	BA-MA
Customer Collocation Care Defined	CCC Basics.doc	RMI-5-2-D-I-18	BA-MA
Collocation Customer Care Help Desk Dispatcher Binder coversheet	CCC Cover_Dispatcher.ppt	RMI-5-2-D-I-19	BA-MA
Collocation Customer Care Help Desk Specialist Binder coversheet	CCC Cover_Specialist.ppt	RMI-5-2-D-I-20	BA-MA
Central Office Equipment Guidelines, Collocation – COE Deployment Plan; Doc. No. G981201-05; Issue Date: January 20, 2000	g981201-05.pdf	RMI-5-2-D-I-21	BA-MA

Document	File Name	Location in Work Papers	Source
DTE MA No. 17, Miscellaneous Network Services, Part A, Section 2, Issued: April 21, 2000, Effective: May 21, 2000	a_sec2.pdf	RMI-5-2-D-I-22	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part B, Section 13, Issued: May 25, 2000, Effective: June 24, 2000	b_sec13.pdf	RMI-5-2-D-I-23	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part E, Section 1, Issued: April 21, 2000, Effective: May 21, 2000	e_sec1.pdf	RMI-5-2-D-I-24	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part E, Section 10, Issued: May 19, 2000, Effective: June 18, 2000	e_sec10.pdf	RMI-5-2-D-I-25	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part E, Section 2, Issued: April 21, 2000, Effective: May 21, 2000	e_sec2.pdf	RMI-5-2-E-I-1	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part E, Section 3, Issued: April 21, 2000, Effective: May 21, 2000	e_sec3.pdf	RMI-5-2-E-I-2	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part E, Section 4, Issued: April 21, 2000, Effective: May 21, 2000	e_sec4.pdf	RMI-5-2-E-I-3	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part E, Section 5, Issued: April 21, 2000, Effective: May 21, 2000	e_sec5.pdf	RMI-5-2-E-I-4	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part E, Section 6, Issued: April 21, 2000, Effective: May 21, 2000	e_sec6.pdf	RMI-5-2-E-I-5	BA-MA

Document	File Name	Location in Work Papers	Source
DTE MA No. 17, Miscellaneous Network Services, Part E, Section 7, Issued: April 21, 2000, Effective: May 21, 2000	e_sec7.pdf	RMI-5-2-E-I-6	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part E, Section 9, Issued: April 21, 2000, Effective: May 21, 2000	e_sec9.pdf	RMI-5-2-E-I-7	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part E, Section 11, Issued: May 17, 2000, Effective: June 16, 2000	e_sec11.pdf	RMI-5-2-E-I-8	BA-MA
DTE MA No. 17, Miscellaneous Network Services, Part M, Section 5, Issued: April 21, 2000, Effective: May 21, 2000	m_sec5.pdf	RMI-5-2-E-I-9	BA-MA
Sample Collocation Customer Care Center Help Desk trouble ticket	Hard Copy	RMI-5-2-E-I-10	BA-MA
Collocation Customer Care Help Desk trouble ticket interval objective	Hard Copy	RMI-5-2-E-I-11	BA-MA
Help Desk Database (stored on file)	OCC-Process.mdb	Hard Copy	BA-MA
Excerpt of pgs. 145-148, Commonwealth of Massachusetts, Department of Telecommunications and Energy, Bell Atlantic OSS Evaluation Project, Master Test Plan, Version 2.0, November 24, 1999	MA MTP Final Version 12499.pdf	RMI-5-2-F-II-1	KPMG Consulting
RMI5 Detailed Test Package	rmi5testpak.doc	RMI-5-2-F-II-2	KPMG Consulting

Document	File Name	Location in Work Papers	Source
Peer Review Sign-off Form	Hard Copy	RMI-5-2-F-II-3	KPMG Consulting
Verification Review	rmi5.2verif.doc	RMI-5-2-F-II-4	KPMG Consulting
BA-MA Customer Network Engineering Regional Collocation Verification Letter (January 5, 2000)	cne_verif.doc	RMI-5-2-F-II-5	KPMG Consulting
BA-MA Central Office Engineering Collocation Verification Letter (January 5, 2000)	coe_verif.doc	RMI-5-2-F-II-6	KPMG Consulting
BA-MA Central Office Engineering/Field Engineering Verification Letter (January 5, 2000)	fieldeng_verif.doc	RMI-5-2-F-II-7	KPMG Consulting
BA-MA Interoffice Facilities Verification Letter (January 5, 2000)	iof_verif.doc	RMI-5-2-F-II-8	KPMG Consulting
BA-MA Local Collocation Coordinator Verification Letter (January 5, 2000)	lcc_verif.doc	RMI-5-2-F-II-9	KPMG Consulting
BA-MA Power/Space/Frame Verification Letter (January 5, 2000)	psf_verif.doc	RMI-5-2-F-II-10	KPMG Consulting
BA-MA Real Estate Verification Letter (January 5, 2000)	re_verif.doc	RMI-5-2-F-II-11	KPMG Consulting
BA-MA Collocation Process (Telecom Industry Services) Verification Letter (December 14, 1999)	maguire_verif.doc	RMI-5-2-F-II-12	KPMG Consulting
BA-MA feedback to the Collocation Process (Telecom Industry Services) Verification Letter (December 23, 1999)	maguire_verifmod.doc	RMI-5-2-F-II-13	KPMG Consulting

Document	File Name	Location in Work Papers	Source
Bell Atlantic Director of Wholesale Network Services Collocation process (Telecom Industry Services) Verification Letter Response (March 1, 2000)	maguire_verifmod-resp.doc	RMI-5-2-F-II-14	BA-MA
BA-MA Customer Network Engineering Regional Collocation Verification Letter Response (January 24, 2000)	CNE.doc	RMI-5-2-F-II-15	BA-MA
BA-MA Central Office Engineering Verification Letter Response (January 24, 2000)	coe.doc	RMI-5-2-F-II-16	BA-MA
BA-MA Field Engineering Verification Letter Response (January 24, 2000)	fieldeng.doc	RMI-5-2-F-II-17	BA-MA
BA-MA Interoffice Facilities Verification Letter Response (January 24, 2000)	iof.doc	RMI-5-2-F-II-18	BA-MA
BA-MA Local Collocation Coordinator Verification Letter Response (January 24, 2000)	lcc.doc	RMI-5-2-F-II-19	BA-MA
BA-MA Power/Space/Frame Verification Letter Response (January 24, 2000)	PSF.doc	RMI-5-2-F-II-20	BA-MA
BA-MA Real Estate Verification Letter Response (January 24, 2000)	Real Estate.doc	RMI-5-2-F-II-21	BA-MA
Bell Atlantic Director – Wholesale Network Services, Interview Report (December 16, 1999)	maguireintrep.doc	RMI-5-2-F-II-22	KPMG Consulting

Document	File Name	Location in Work Papers	Source
Bell Atlantic Director – Wholesale Network Services, Interview Summary, December 16, 1999 (KPMG Consulting original)	991216maguireintsum.doc	RMI-5-2-F-II-23	KPMG Consulting
Bell Atlantic Director – Wholesale Network Services, Interview Summary Response (December 23, 1999)	991216maguireinstum_resp.doc	RMI-5-2-F-II-24	BA-MA
BA-MA Manager – Regional Collocation, Interview Report (January 25, 2000)	semonesintrep.doc	RMI-5-2-F-II-25	KPMG Consulting
BA-MA Manager – Regional Collocation, Interview Summary, January 25, 2000 (KPMG Consulting original)	000125semonesintsum.doc	RMI-5-2-G-II-1	KPMG Consulting
BA-MA Manager – Regional Collocation, Interview Summary Response (January 28, 2000)	000125semonesintsum_resp.doc	RMI-5-2-G-II-2	BA-MA
BA-MA Manager – Local Collocation Coordinator, Interview Report (February 2, 2000)	fleuryintrep.doc	RMI-5-2-G-II-3	KPMG Consulting
BA-MA Manager – Local Collocation Coordinator, Interview Summary, February 2, 2000, (KPMG Consulting original)	000202fleuryintsum.doc	RMI-5-2-G-II-4	KPMG Consulting
BA-MA Manager – Local Collocation Coordinator, Interview Summary Response (February 28, 2000)	000202fleuryinstum_resp.doc	RMI-5-2-G-II-5	BA-MA
KPMG Consulting collocation data request (January 13, 2000)	maguiredatreq.doc	RMI-5-2-G-II-6	KPMG Consulting

Document	File Name	Location in Work Papers	Source
Bell Atlantic data request response (January 26, 2000)	MAGUIRCL~1.doc	RMI-5-2-G-II-7	BA-MA
CFA Process for Bell Atlantic-North (Supplement to Interoffice Facilities Verification Letter on January 24, 2000)	CFA_MASS.doc	RMI-5-2-G-II-8	BA-MA
KPMG Consulting Exception No. 26, New York OSS Test	x26.pdf	RMI-5-2-G-II-9	KPMG Consulting
BA-NY Response to Exception No. 26, New York OSS Test	x26rrev.pdf	RMI-5-2-G-II-10	KPMG Consulting
KPMG Consulting Exception Closure Report for Exception No. 26, New York OSS Test	x26z.pdf	RMI-5-2-G-II-11	KPMG Consulting
State of New York Department of Public Service, Bell Atlantic OSS Evaluation Project, Final Report, Version 2.0, August 6, 1999, Excerpt pg. VII-59 to VII-76	Hard Copy	RMI-5-2-G-II-12	KPMG Consulting
Observation Report #56 (Mismatching collocation application forms)	MA Observation report 56.pdf	RMI-5-2-G-II-13	KPMG Consulting
BA-MA Collocation Customer Care Interview Report (June 15, 2000)	joyintrep.doc	RMI-5-2-G-II-14	KPMG Consulting
BA-MA Collocation Customer Care Interview Summary (June 15, 2000)	000615joyintsum.doc	RMI-5-2-G-II-15	KPMG Consulting
BA-MA Collocation Customer Care Interview Summary Response (June 15, 2000)	000615joyintsum_resp.doc	RMI-5-2-G-II-16	KPMG Consulting

Document	File Name	Location in Work Papers	Source
Telephone Log	Hard Copy	RMI-5-2-G-II-17	KPMG Consulting
RMI5 Exit Peer Review Sign-off Letter	Hard Copy	RMI-5-2-G-II-18	KPMG Consulting
CLEC 1 Data (Proprietary)	Hard Copy	RMI-5-2-H-III-1	KPMG Consulting
CLEC 2 Data (Proprietary)	Hard Copy	RMI-5-2-H-III-2	KPMG Consulting
CLEC 3 Data (Proprietary)	Hard Copy	RMI-5-2-H-III-3	KPMG Consulting
CLEC 4 Data (Proprietary)	Hard Copy	RMI-5-2-H-III-4	KPMG Consulting

#### 2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

#### 2.5 Evaluation Methods

The evaluation methods performed for this test relied on the analysis of information obtained through interviews and documentation provided by Bell Atlantic personnel supporting the NDR or collocation process in Massachusetts. In addition, discussions were held with members of the CLEC community to understand their experiences with the NDR and/or collocation processes.

#### 2.6 Analysis Methods

The NDR, Collocation, and Interconnection Planning Verification and Validation Review included a checklist of evaluation criteria developed by the test manager during the initial phase of the Bell Atlantic-Massachusetts OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the NDR, Collocation, and Interconnection Planning Verification and Validation Review.

The data collected were analyzed employing the evaluation criteria referenced above.

### 3.0 Results Summary

This section identifies the evaluation criteria and test results.

#### 3.1 Results & Analysis

The results of this test are presented in the tables below.

**Table 5-4: RMI5-1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-5-1-1	NDR process responsibilities and activities are defined.	Satisfied	The responsibilities for implementing an NDR are defined in internal BA-MA documentation and the CLEC Handbook (March 2000, Volume I, Section 6.4.2). CLECs interact primarily with the Bell Atlantic Account Manager and the Service Delivery Engineer for the duration of the NDR project. The Service Delivery Engineer focuses more on the technical and implementation aspects of an NDR. If customized routing is required then the Software Provisioning team will be involved.
RMI-5-1-2	Scope and objectives of an NDR are defined and documented.	Satisfied	The scope and objectives of an NDR are defined in the CLEC Handbook, (March 2000, Volume I, Section 6.4.2) and within various BA-MA internal documents.
RMI-5-1-3	Essential elements of the NDR process are in place and documented.	Satisfied	Essential elements of the NDR process are in place and are documented in various internal BA-MA documents and in the CLEC Handbook (March 2000, Volume I, Section 6.4.2). The latest NDR forms are available on Bell Atlantic's Wholesale Markets website ( <a href="http://www.bellatlantic.com/wholesale">http://www.bellatlantic.com/wholesale</a> ). Communication with the CLEC is held before and during the life cycle of an NDR implementation.
RMI-5-1-4	NDR process projects are planned and executed according to a documented structured methodology.	Satisfied	BA-MA has various internal documents like ndrstand-Process.doc that define the steps, intervals, and methodologies required to implement an NDR.

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-5-1-5	The NDR process includes procedures for addressing errors and exceptions.	Satisfied	<p>BA-MA has internal procedures and documentation that address errors and exceptions that may be encountered in an NDR implementation. BA-MA carries out testing for the implementation of new Line Class Codes. A test call matrix consisting of eleven call types is carried out per Line Class Code per switch. When the standard set of Line Class Codes were deployed in Massachusetts, testing of each Line Class Code was conducted. Copies of the test call logs are maintained by BA-MA.</p> <p>In addition, each Service Delivery Engineer monitors and tracks each NDR implementation to ensure it is delivered in a timely manner.</p>
RMI-5-1-6	There are capacities and resources available to handle increasing volumes of NDR process work.	Satisfied	BA-MA evaluates internal NDR forecasts and demands to ensure there are sufficient resources to meet demand.
RMI-5-1-7	The NDR process defines meetings and milestones.	Satisfied	<p>Meetings and milestones for the NDR process are defined in the CLEC Handbook (March 2000, Volume I, Section 6.4.2) and various internal BA-MA documents. The NDR process is divided into three general phases:</p> <p>The pre-NDR where the CLEC and BA-MA discuss preliminary requirements and ensure the CLEC has or will acquire the appropriate material.</p> <p>The NDR design phase where the detailed requirements of the CLEC are determined. (Occurs when the Option A NDR process is chosen.)</p> <p>The NDR implementation where BA-MA performs the necessary work to deliver. BA-MA notifies the CLEC of the NDR completion.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-5-1-8	Processing intervals for NDR processes are established and adhered to.	Satisfied	Intervals for an NDR are described in internal BA-MA documentation and in the CLEC Handbook (March 2000, Volume I, Section 6.4.2). An NDR with predefined Line Class Codes takes thirty to forty-five business days from receipt of all the necessary forms. If a CLEC chooses to build custom Line Class Codes and uses customized routing, the interval is negotiated. Implementation typically takes several months.
RMI-5-1-9	An escalation and problem resolution method is established.	Satisfied	An escalation and problem resolution system exists. If there is an issue surrounding an NDR implementation, the CLEC first works with the BA-MA Account Manager and Service Delivery Engineer to attempt to resolve the situation. A CLEC may escalate the matter to the Bell Atlantic NDR Manager if necessary, and further up the BA-MA management organization as required.
RMI-5-1-10	NDR process implementations and deliverables undergo generally acceptable testing to ensure the proper installation of a CLEC's presence.	Satisfied	BA-MA has internal documentation that outlines testing procedures when new Line Class Codes and routing are built in its switches. Test call logs are also maintained to record test results.
RMI-5-1-11	Forms and templates exist to facilitate appropriate data collection of the NDR process, and are presented in a complete manner.	Satisfied	The necessary forms required to pursue an NDR are contained in the CLEC Handbook (March 2000, Volume I, Section 8.5) which are also are posted on Bell Atlantic's Wholesale Markets website ( <a href="http://www.bellatlantic.com/wholesale/">http://www.bellatlantic.com/wholesale/</a> ). Associated with some of the forms are guidelines on how they can be completed.

**Table 5-5: RMI5-2 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-5-2-1	Collocation and interconnection projects are planned and executed according to a documented, structured methodology.	Satisfied	<p>The different types of collocation are documented in the CLEC Handbooks (March 2000, Volume I, Sections 6.4.1 and 8.7.3; Volume III, Section 4) and various internal BA-MA documents.</p> <p>All collocation projects are tracked in a central “Collocation Database” which is utilized by BA-MA personnel involved with the collocation process.</p>
RMI-5-2-2	Bell Atlantic and CLEC collocation and interconnection responsibilities are defined.	Satisfied	Bell Atlantic and CLEC responsibilities are defined in the CLEC Handbooks (March 2000, Volume I, Sections 6.4.1 and 8.7; Volume III, Sections 4.1-4.5), and various internal BA-MA documentation.
RMI-5-2-3	Collocation and interconnection methodology specifies meetings and milestones.	Satisfied	<p>Meetings and milestones in the collocation process are defined in the CLEC Handbook (March 2000, Volume I, Section 8.7.3; Volume III, Sections 4.2, 4.3, and 4.5) and various internal BA-MA documentation.</p> <p>It has been indicated that there is ongoing communication between the two parties during the collocation process. CLECs are provided with written and verbal correspondence as certain milestones are reached. For a physical collocation, a method of procedure (MOP) and turnover meeting is held between BA-MA and the CLEC.</p>
RMI-5-2-4	A common tracking system is used to monitor collocation and interconnection projects.	Satisfied	BA-MA has a common tracking system, called the Collocation Database. The Collocation Database is used by internal BA-MA teams involved in the collocation process to track and manage collocation projects. Major milestones are tracked by the Collocation Database and reports are regularly generated from it for project performance monitoring.

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-5-2-5	Sufficient resources are available to handle collocation and interconnection requests.	Satisfied	<p>BA-MA has sufficient resources to handle collocation requests. As described to KPMG Consulting, if a large volume of application forms is submitted simultaneously, BA-MA will negotiate a delivery schedule with the CLEC(s). CLEC forecast information is used by the collocation organizations to plan resources as required for increases in workload.</p> <p>BA-MA management performs regular resource planning by reviewing existing resources against future workload.</p>
RMI-5-2-6	Collocation and interconnection decisions are documented, adhered to, and communicated to Bell Atlantic and CLEC participants.	Satisfied	<p>The Collocation Database acts as a central repository of information pertaining to each collocation application. Issues and documents are recorded and attached to each collocation application. BA-MA personnel with responsibility for the collocation applications have access to the database, which provides a real-time view of events.</p> <p>Daily joint meetings are held by BA-MA collocation teams to discuss the status of each collocation application and its progress.</p> <p>Regular communication is exchanged between BA-MA and the CLEC for collocation jobs. The BA-MA Project Manager and Local Collocation Coordinator are the main points of contacts for the CLECs.</p>
RMI-5-2-7	The collocation and interconnection process includes a dispute resolution and escalation process and is adhered to.	Satisfied	<p>The dispute resolution and escalation process is described in internal BA-MA documentation and the CLEC Handbook (March 2000, Volume III, Sections 4.2 and 4.3).</p> <p>If there is an issue that is specific to a particular collocation site, the CLEC will work with the Local Collocation Coordinator to resolve those issues. The CLEC may escalate matters to the BA-MA Project Manager. BA-MA will escalate the matter internally to the departments that are involved with that particular matter.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-5-2-8	Standards and procedures are defined and adhered to for ensuring that qualified personnel are assigned to a project or customer, and levels of competency are maintained.	Satisfied	<p>Each CLEC is assigned a Bell Atlantic Project Manager dedicated to that account regardless of geographic region. BA-MA has Local Collocation Coordinators to help with the coordination and execution of the collocation projects at the local geographic level.</p> <p>There is no formal internal BA-MA training for collocation; however, personnel receive training related to their specific area(s). In addition, many BA-MA personnel involved in the collocation process have many years of industry related experience and are knowledgeable in their line of work.</p> <p>For virtual collocation jobs there are guidelines in the CLEC Handbook (March 2000, Volume III, Section 4.3) that outline the necessary training that the CLECs must provide to BA-MA personnel in order to maintain the CLEC's equipment.</p> <p>In New England, BA-MA performs all equipment installations. Any work that is not performed by BA-MA personnel is performed by BA-MA approved vendors/contractors. Similarly, CLECs are required to utilize vendors/contractors that are approved by BA-MA. CLECs may apply to become BA-MA approved contractors/installers.</p>
RMI-5-2-9	Procedures are defined and adhered to for ensuring that project staff are available to collaborate and empowered to resolve issues at the working level.	Satisfied	<p>The Bell Atlantic Project Manager, Local Collocation Coordinator, and Collocation Customer Care Center provide support to the CLEC. Project Managers are assigned to a CLEC and provide assistance with overall collocation activities. The Local Collocation Coordinator functions as a project manager at the local geographical level of a particular collocation implementation and deals with all local implementation issues. The Local Collocation Coordinator has ties with all collocation support groups and requests those teams' expertise to ensure the delivery of a collocation.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p>The Collocation Customer Care team provides CLECs with post hand-over support. The Collocation Customer Care Center is essentially a help desk that has direct communication with all Bell Atlantic collocation teams to handle any issues that may arise.</p> <p>Regular communication occurs between the CLEC and BA-MA to discuss any collocation matters.</p> <p>All Bell Atlantic groups that support the collocation process hold joint daily meetings to discuss and address any issues that may arise.</p>
RMI-5-2-10	Procedures are defined and adhered to for ensuring CLECs have access to facilities as required.	Satisfied	<p>Guidelines for CLEC access to equipment and facilities are defined. The CLEC Handbook (March 2000, Volume I, Section 8.7.3; Volume III, Section 4.2, 4.5.2) and Bell Atlantic security documentation guidelines (<a href="http://www.bellatlantic.com/wholesale/html/pdfs/colosec_web.pdf">http://www.bellatlantic.com/wholesale/html/pdfs/colosec_web.pdf</a>) provide a description of access rules.</p>
RMI-5-2-11	Generally acceptable testing techniques and standards of delivery for collocation and interconnections are established and adhered to, including customer signoff.	Satisfied	<p>A set of defined industry standards, such as Telcordia (formerly Bellcore) Network Equipment Building Systems (NEBS), and Bell Atlantic standards exists for areas such as allowable equipment, workmanship, and general central office installation standards. Bell Atlantic, CLECs, and any of its vendors or contractors are required to follow these standards. Many of these industry and Bell Atlantic standards are referenced in the CLEC Handbook (March 2000, Volume I, Section 8.7; Volume III, Sections 4.2, 4.3, 4.5.1).</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p>In addition, some of these documented standards are described or are posted on Bell Atlantic's Wholesale Markets website. For example, <a href="http://www.bellatlantic.com/wholesale/html/res_nebs.htm">http://www.bellatlantic.com/wholesale/html/res_nebs.htm</a>, <a href="http://www.bellatlantic.com/wholesale/html/res_install_standards.htm">http://www.bellatlantic.com/wholesale/html/res_install_standards.htm</a>, and <a href="http://www.bellatlantic.com/wholesale/html/res_coloc_cage.htm">http://www.bellatlantic.com/wholesale/html/res_coloc_cage.htm</a>.</p> <p>Prior to the turn over of any physical collocation to the CLEC, Bell Atlantic performs an internal quality audit. The final deliverable(s) for a physical collocation requires CLEC signoff.</p>
RMI-5-2-12	Procedures are established to define the scope of each collocation and interconnection project.	Satisfied	The scope and procedures of the various types of the collocation processes are described in the CLEC Handbook (March 2000, Volume I, Section 6.4.1; Volume III, Sections 4.1-4.5) and various internal Bell Atlantic documentation.
RMI-5-2-13	Scope changes are quantified and tracked. Formal procedures are followed to change scope.	Satisfied	<p>A process exists to handle changes to the scope of a collocation project. A change to a physical collocation is called an augmentation and a change to a virtual collocation is called a rearrangement. These steps are described in the CLEC Handbook (March 2000, Volume III, Sections 4.2, 4.3). CLECs are required to re-file a collocation application form in the event of a change.</p> <p>Bell Atlantic assesses changes to collocation jobs that are in progress on an individual basis. The impact of these changes is dependent on many factors such as resources, time, degree of change, etc. Any changes to the project schedule are updated in the Collocation Database accordingly.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-5-2-14	Procedures are in place and adhered to for estimating, documenting, and managing the design and costs of collocation and interconnection activities. Major collocation and interconnection design and price changes that affect a CLEC are communicated before they are incurred.	Satisfied	Procedures exist for handling the estimation, documentation, and management of costs for collocation projects. The CLEC Handbook (March 2000, Volume III, Sections 4.2, 4.3, 4.4, 4.5) and tariff documents (e.g., DTE MA No. 17) describe the costs for which the CLEC is responsible.  BA-MA uses flat rate pricing for collocation projects in the Commonwealth of Massachusetts. The CLEC only incurs additional costs for work above and beyond the scope of a standard collocation project or special construction charges.
RMI-5-2-15	The sequence and duration of collocation activities are developed and documented. The process includes establishment of a list of due dates for deliverables for CLECs and Bell Atlantic.	Satisfied	The sequence and duration of major events and intervals associated with these events are defined in the CLEC Handbook (March 2000, Volume I, Section 8.7.3; Volume III, Sections 4.2, 4.3) and internal BA-MA documentation.
RMI-5-2-16	Deviations from the planned schedule are tracked and managed.	Satisfied	Variations in the committed schedule for collocation projects are monitored and tracked. BA-MA regularly generates internal reports and holds daily collocation team meetings to monitor potential deviations from the schedule. Any changes to the schedule are communicated to all impacted teams and the CLEC. The Collocation Database serves as the central project tracking system which is accessible by BA-MA collocation participants.
RMI-5-2-17	The costs of collocation and interconnection activities are estimated and documented.	Satisfied	Massachusetts uses a flat rate pricing for collocation projects; therefore, there are no cost estimates. These costs are defined and documented in the CLEC Handbook (March 2000, Volume III, Sections 4.2, 4.3, 4.4.1, 4.4.2, 4.5.1, 4.5.2), internal BA-MA documentation, and tariff documents (DTE MA No. 17).



## **F. Test Results: System Administration Help Desk Functional Review (RMI6)**

### **1.0 Description**

The System Administration Help Desk Functional Review evaluated process elements of Bell Atlantic System Support (BASS) Help Desk function. Interviews, process walkthroughs, and documentation reviews were conducted to review the BASS Help Desk procedures for processing, closing, tracking, and escalating calls. Management practices for capacity planning, performance measurement, and process improvements were evaluated.

### **2.0 Methodology**

This section summarizes the test methodology.

#### **2.1 Business Process Description**

The BASS Help Desk records and responds to user questions or problems regarding connectivity and administration of their system interface with Bell Atlantic-Massachusetts (BA-MA). Calls for problems not in the scope of BASS Help Desk services are referred to the appropriate BA-MA Help Desk or service area. Depending on the nature of the problem, the issue may be resolved during the course of the phone call or referred to another technician, who will then communicate with the user.

The BA-MA procedure requires the BASS Help Desk Call Agents to log all incoming calls into the BASS Help Desk database. Each call generates a unique trouble ticket number in the database. The date the call was initiated, relevant customer information, and a description of the problem and its resolution are logged. Each trouble ticket is assigned a severity code. Procedure also requires trouble tickets to be closed upon resolution of the issue/problem.

#### **2.2 Scenarios**

Scenarios were not applicable to this test.

#### **2.3 Test Targets & Measures**

The test target was the Bell Atlantic System Support Help Desk. Processes, sub-processes, evaluation measures, and associated test cross-reference numbers are summarized in the following table. The last column, “Test Cross-Reference,” indicates where the particular measures are addressed in Section 3.1 “Results & Analysis.”

**Table 6-1: Test Target Cross-Reference**

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Process Help Desk Call	Resolution of user question, problem or issue	Completeness and consistency of process	RMI-6-1, RMI-6-2, RMI-6-3, RMI-6-6, RMI-6-7, RMI-6-8, RMI-6-10, RMI-6-11
Close Help Desk Call	Closure Posting	Completeness and consistency of process	RMI-6-1, RMI-6-4, RMI-6-8, RMI-6-9, RMI-6-10
Status Tracking and Reporting	Status tracking and reporting	Completeness and consistency of process	RMI-6-1, RMI-6-8, RMI-6-9, RMI-6-10, RMI-6-11
Problem Escalation	User initiated escalation	Completeness and consistency of process	RMI-6-1, RMI-6-4, RMI-6-5, RMI-6-11
Capacity Management	Capacity planning process	Completeness and consistency of process	RMI-6-1, RMI-6-12, RMI-6-14, RMI-6-16
Security and Integrity	Data access controls	Safety of process	RMI-6-1, RMI-6-6, RMI-6-13
Process Management	General management practices	Completeness and consistency of process	RMI-6-1, RMI-6-10, RMI-6-12, RMI-6-14, RMI-6-15, RMI-6-16
Process Management	Performance measurement process	Controllability, efficiency and reliability of process	RMI-6-1, RMI-6-14, RMI-6-15
Process Management	Process improvement	Completeness of process improvement practices	RMI-6-1, RMI-6-16

## 2.4 Data Sources

The data collected for the test are summarized in the table below.

**Table 6-2: Data Sources for the System Administration Help Desk Functional Review**

Document	File Name	Location in Work Papers	Source
Sample Reports	Hard Copy	RMI-6-A-I-1	Bell Atlantic
Wholesale Customer Care Operations Meeting Material	Hard Copy	RMI-6-A-I-2	Bell Atlantic

Document	File Name	Location in Work Papers	Source
Bell Atlantic System Support Help Desk Bell Atlantic Firewall Access Process Document	Hard Copy	RMI-6-A-I-3	Bell Atlantic
Bell Atlantic System Support Help Desk Status and Tracking Process Document	Hard Copy	RMI-6-A-I-4	Bell Atlantic
CLEC Interface Outage and Type 1 Notification Process	Hard Copy	RMI-6-A-I-5	Bell Atlantic
Bell Atlantic System Support Exceptions Process Document	Hard Copy	RMI-6-A-I-6	Bell Atlantic
Bell Atlantic System Support Help Desk Call Agent Process Document	Hard Copy	RMI-6-A-I-7	Bell Atlantic
Bell Atlantic System Support Help Desk for CLEC Billing Support Process Document	Hard Copy	RMI-6-A-I-8	Bell Atlantic
Bell Atlantic System Support Help Desk Service Center Trouble Ticket Input Process	Hard Copy	RMI-6-A-I-9	Bell Atlantic
Bell Atlantic Help Desk Operations Organization Chart	Hard Copy	RMI-6-A-I-10	Bell Atlantic
Wholesale Customer Care Center Rollout meeting material	WCCC Rollout External Communicationrevised. pdf	RMI-6-A-I-11	Bell Atlantic
Bell Atlantic System Support Help Desk Process Validation	Hard Copy	RMI-6-A-I-12	Bell Atlantic

Document	File Name	Location in Work Papers	Source
Bell Atlantic's response to KPMG Consulting's supplemental data request "CLEC Interface Outage and Type 1 Notification Process"	BASSHD Notification and Paging Process Document.doc	RMI-6-A-I-13	Bell Atlantic
Bell Atlantic's response to KPMG Consulting's Interview Summary – Director of Bell Atlantic System Support Help Desk	Rmi6int_sum_KL.doc	RMI-6-A-I-14	Bell Atlantic
Bell Atlantic's response to KPMG Consulting's Interview Summary – Manager of Bell Atlantic System Support Help Desk	Rmi6int_sum_MR.doc	RMI-6-A-I-15	Bell Atlantic
Bell Atlantic's response to Verification and Validation letter	Hard Copy	RMI-6-A-I-16	Bell Atlantic
Bell Atlantic-Massachusetts Master Test Plan Final Version 2.0 (November 24, 1999)	MA MTP Final Version 112499.pdf	RMI-6-A-II-17	KPMG Consulting
KPMG Consulting – Bell Atlantic Initial Data Request	Bassdatareq.doc	RMI-6-A-II-18	KPMG Consulting
RMI6 Peer Review	Rmi6testpak.doc	RMI-6-A-II-19	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Report – Director of Bell Atlantic System Support Help Desk	Rmi6_int_rep_KL.doc	RMI-6-A-II-20	KPMG Consulting

Document	File Name	Location in Work Papers	Source
KPMG Consulting – Bell Atlantic Interview Report – Manager of Bell Atlantic System Support Help Desk	Rmi6_int_rep_MR.doc	RMI-6-A-II-21	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Report – Call Agent	Rmi6_int_rep_VE.doc	RMI-6-A-II-22	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Guide	Rmi6_int_gd.doc	RMI-6-A-II-23	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Summary – Director of Bell Atlantic System Support Help Desk	Rmi6int_summ_KL1.doc	RMI-6-A-II-24	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Summary – Manager of Bell Atlantic System Support Help Desk	Rmi6int_summ_MR1.doc	RMI-6-A-II-25	KPMG Consulting
Test Results: System Support Help Desk Functional Review report	Hard Copy	RMI-6-A-II-26	KPMG Consulting
Observation Report #21 Bell Atlantic OSS Trial- Observation Report #21	Hard Copy	RMI-6-A-II-27	KPMG Consulting
Bell Atlantic – Massachusetts CLEC Questionnaire ATT response	Hard Copy	RMI-6-A-II-28	KPMG Consulting
Bell Atlantic- Massachusetts CLEC Questionnaire MCI response	Hard Copy	RMI-6-A-II-29	KPMG Consulting

Document	File Name	Location in Work Papers	Source
Bell Atlantic-Massachusetts CLEC Interview Guide	Hard Copy	RMI-6-A-II-30	KPMG Consulting
Bell Atlantic-Massachusetts CLEC Interview Report – MCI	Hard Copy	RMI-6-A-II-31	KPMG Consulting
RMI6 Exit Peer Review Sign-off Letter	Hard Copy	RMI-6-A-II-32	KPMG Consulting

#### 2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

#### 2.5 Evaluation Methods

The functional evaluation of the Bell Atlantic System Support Help Desk consisted of a series of interviews and documentation reviews.

#### 2.6 Analysis Methods

The System Administration Help Desk Functional Review included a checklist of evaluation criteria developed by the test manager during the initial phase of the Bell Atlantic-Massachusetts OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the System Administration Help Desk Functional Review.

The data collected were analyzed employing the evaluation criteria referenced above.

### 3.0 Results Summary

This section identifies the evaluation criteria and test results.

#### 3.1 Results & Analysis

The results of this test are presented in the table below.

**Table 6-3: RMI6 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-6-1	Help Desk responsibilities and activities are defined.	Satisfied	Bell Atlantic System Support (BASS) Help Desk responsibilities and activities are defined on the Bell Atlantic Wholesale Markets website, and CLEC Handbook (March 2000, Volume II, Section 5.3).
RMI-6-2	Scope of Help Desk services covers customer requirements.	Satisfied	The BASS Help Desk addresses customer inquiries related to Web GUI, Operational Support Systems Gateway, and CLEC/Reseller applications. Customer questions that are within the scope of the BASS Help Desk, but cannot be answered, are referred to Bell Atlantic Subject Matter Experts.
RMI-6-3	Scope and objectives of Help Desk are defined, documented, and communicated to customers.	Satisfied	The scope of the BASS Help Desk is to address questions related to the Bell Atlantic Operating Systems Support Gateway (e.g., connectivity issues, system errors, GUI password problems), and technical billing issues. Calls related to technical billing issues are referred to the Billing Help Desk. Documentation describing the function and scope of the Help Desk is available on the Bell Atlantic Wholesale Markets website and CLEC Handbook (March 2000, Volume II, Section 5.3).
RMI-6-4	A complete (e.g., beginning to end) description of the Help Desk process is documented.	Satisfied	Bell Atlantic has internal documentation that describes the various Help Desk processes.  The documents are updated regularly by Bell Atlantic to ensure their accuracy. Furthermore, as part of its ISO 9000 compliance, the Help Desk team regularly reviews and updates process documentation.

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-6-5	The process includes procedures for addressing errors and exceptions.	Satisfied	The process and procedures for CLECs to follow for addressing errors and exceptions include contacting the BASS Help Desk and, if appropriate, their Bell Atlantic Account Manager. Upon answering a call, the BASS Help Desk Call Agent will assess the error and its severity and issue a trouble ticket for tracking purposes. If necessary, the Call Agent will refer the issue to a Bell Atlantic subject matter expert (SME), who will assist in the resolution of the issue.
	<b>Procedure Elements:</b>		
RMI-6-6	Process includes complete and consistent call intake procedures (logging and acknowledgment).	Satisfied	<p>BASS Help Desk Call Agents answer all phone calls directed to the BASS Help Desk. The BASS Call Agent will ask for relevant information, and if it is a new problem, a new trouble ticket number will be issued as a point of reference. All information pertaining to the trouble ticket will be logged in a database. It is the responsibility of the BASS Help Desk Call Agent who created the trouble ticket to ensure the trouble ticket status is resolved and closed.</p> <p>Any calls to the BASS Help Desk outside the hours of operation are directed to a voice message system where the caller may leave a detailed message and a Bell Atlantic employee will be notified of the call via a page.</p>
RMI-6-7	Help Desk process defines criteria and procedures for severity coding Help Desk calls.	Satisfied	The BASS Help Desk assigns a severity rating to a call based on the severity of the problem. Severity ratings are listed and the qualifications for each rating is described in the internal Bell Atlantic document “CLEC Interface Outage and Type I Notification Process.” At the same time, Junior Call Agents will have to confirm the severity rating with a Senior Call Agent. A severity rating is assigned to a new trouble ticket upon creation and entered in the trouble ticket database.

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-6-8	Help Desk includes procedures for referral.	Satisfied	<p>The BASS Help Desk will refer the trouble ticket to a subject matter expert or another Bell Atlantic group if it is beyond its scope of knowledge or if further technical assistance is required. The BASS Help Desk Call Agent will work with the caller and notify him/her if the trouble ticket has been referred to a subject matter expert. Call Agents have a contact list of Bell Atlantic subject matter experts available.</p> <p>The BASS Help Desk has started to receive phone calls related to technical Billing issues, and will refer calls to the Billing Help Desk.</p>
RMI-6-9	Process includes complete and consistent procedure for closure posting.	Satisfied	<p>Every trouble ticket created is associated with a BASS Help Desk Call Agent and it is the responsibility of that Call Agent to follow through with the trouble ticket until it is closed. If a Call Agent cannot resolve the customer issue on the initial call and a trouble ticket has been created, the Call Agent will refer the situation to Bell Atlantic subject matter experts.</p> <p>While the situation is being addressed by Bell Atlantic subject matter experts, the Call Agent regularly provides the customer with an update on the trouble ticket until the issue is resolved between the CLEC and Bell Atlantic, at which time the trouble ticket is closed.</p> <p>The status of trouble tickets is stored on a database. Bell Atlantic management may review reports on the statuses of trouble tickets and determine if they need to be escalated as required.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-6-10	Process includes complete and consistent procedure for status tracking and management reporting.	Satisfied	<p>The BASS Help Desk keeps a database so the status of all trouble tickets can be monitored and reviewed. Reports can be generated for further analysis as required.</p> <p>The Electronic Call Distribution (ECD) log is used to track the number of calls that have come in to the BASS Help Desk. Additionally, the ECD tracks statistics on incoming call traffic, transferred calls, calls on hold, and abandoned calls. Bell Atlantic Management uses these ECD logs as a performance reporting tool.</p>
RMI-6-11	Process includes complete and consistent procedure for escalating user issue/problem.	Satisfied	<p>The procedure for escalating a user issue/problem is determined by the severity of the problem as defined by Bell Atlantic Change Control document “Change Management Notification Process” (February 2000). Internally within Bell Atlantic, the escalation path starts from the BASS Help Desk Call Agent, to the Team Lead, next is the Manager, followed by the Director.</p>
RMI-6-12	Process includes complete and consistent procedure for capacity planning.	Satisfied	<p>Bell Atlantic management performs capacity planning for the BASS Help Desk. Performance reports are used to assist in developing forecasts to determine the amount of resources required to satisfy forecasted demands.</p>
RMI-6-13	Process includes procedures for maintaining security and integrity of data access controls.	Satisfied	<p>For caller access security, all inbound callers are required to provide identification information to ensure appropriate personnel are contacting the BASS Help Desk. In addition, the BASS Help Desk has responsibilities for processing and verifying firewall security user account access forms submitted by CLEC/Resellers.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
	<b>Performance Measurement and Reporting:</b>		
RMI-6-14	Process performance measures are defined and measured.	Satisfied	<p>The BASS Help Desk has an Electronic Call Distribution (ECD) database that contains data related to incoming calls to the BASS Help Desk. Some of the examples of process performance measures are defined as average talk time, average queue, longest queue, and average wait to abandon. The reports are used for forecasting and performance management. The ECD report can be broken down to individual Call Agents or the BASS Help Desk as a whole.</p> <p>There is a trouble ticket database that keeps track of all the trouble tickets that the BASS Help Desk Call Agents create.</p>
RMI-6-15	Responsibilities for tracking performance are assigned.	Satisfied	The BASS Help Desk management team monitors the performance of the BASS Help Desk through group and individual call statistics, and activities such as call monitoring.
RMI-6-16	Process improvement procedures are defined and responsibilities assigned.	Satisfied	<p>Bell Atlantic maintains ISO 9000 compliance standards that describe process improvement procedures. As well, responsibilities for maintaining these procedures are assigned by the BASS Help Desk Manager and Director.</p> <p>Feedback on the BASS Help Desk is also provided through Industry Change Control meetings.</p>



## **G. Test Results: System Administration Help Desk Performance Data Review (RMI7)**

### **1.0 Description**

The System Administration Help Desk Performance Data Review evaluated the performance of the Bell Atlantic System Support (BASS) Help Desk function. The objective of the test was to measure the timeliness of the BASS Help Desk process from inception (i.e., receipt of call) to closure (i.e., resolution of issue). This test relied exclusively on analyzing performance data on closed tickets from Bell Atlantic-Massachusetts (BA-MA) System Support Help Desk database.

### **2.0 Methodology**

This section summarizes the test methodology.

#### **2.1 Business Process Description**

The BASS Help Desk records and responds to CLEC questions or problems regarding connectivity and administration of their system interface with BA-MA. BA-MA procedures instructs BASS Help Desk Call Agents to log all incoming calls into the BASS Help Desk database. Each call generates a unique trouble ticket number. The date the call was opened is logged, along with other relevant customer information and a description of the problem and its resolution. Each trouble ticket is assigned a severity code. The procedure also requires trouble tickets to be “closed” upon resolution and for a closure date to be entered into the database. The BASS Help Desk database includes the “Age” of each trouble ticket, which is the number of days it has remained open.

#### **2.2 Scenarios**

Scenarios were not applicable to this test.

#### **2.3 Test Targets & Measures**

The test target was the Bell Atlantic System Support Help Desk. Processes, sub-processes, evaluation measures, and associated test cross-reference numbers are summarized in the following table. The last column, “Test Cross-Reference,” indicates where the particular measures are addressed in Section 3.1 “Results & Analysis.”

**Table 7-1: Test Target Cross-Reference**

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Close Help Desk Call	Closure posting	Timeliness of process	See Table 7-3 in Section 3.1

## 2.4 Data Sources

The data collected for the test are summarized in the table below.

**Table 7-2: Data Sources for System Administration  
Help Desk Performance Data Review**

Document	File Name	Location in Work Papers	Source
ECD Call Report (September 1999)	Hard Copy	RMI-7-A-I-1	Bell Atlantic
ECD Call Report (October 1999)	Hard Copy	RMI-7-A-I-2	Bell Atlantic
ECD Call Report (November 1999)	Hard Copy	RMI-7-A-I-3	Bell Atlantic
ECD Call Report (December 1999)	Hard Copy	RMI-7-A-I-4	Bell Atlantic
ECD Call Report (January 2000)	Hard Copy	RMI-7-A-I-5	Bell Atlantic
ECD Call Report (February 2000)	Hard Copy	RMI-7-A-I-6	Bell Atlantic
ECD Call Report (March 2000)	Hard Copy	RMI-7-A-I-7	Bell Atlantic
ECD Call Report (April 2000)	Hard Copy	RMI-7-A-I-8	Bell Atlantic
ECD Call Report by call agent	Hard Copy	RMI-7-A-I-9	Bell Atlantic
Bell Atlantic Trouble Ticket database extract (December 1999)	Dec-tickets.xls	RMI-7-A-I-10	Bell Atlantic
BASS HD Paging and Notification process document	Hard Copy	RMI-7-A-I-11	Bell Atlantic
Bell Atlantic Trouble Ticket database extract (October 1999)	Oct99.xls	RMI-7-A-I-12	Bell Atlantic
Revised Bell Atlantic Trouble Ticket database extract (December 1999)	Dec-tickets.xls	RMI-7-A-I-13	Bell Atlantic

Document	File Name	Location in Work Papers	Source
Bell Atlantic Trouble Ticket database extract (November 1999)	NovKPMGsc.xls	RMI-7-A-I-14	Bell Atlantic
Bell Atlantic Trouble Ticket database extract (November 1999)	NovKPMGsd.xls	RMI-7-A-I-15	Bell Atlantic
Bell Atlantic Trouble Ticket database extract (January 2000)	Jan00_tickets.xls	RMI-7-A-I-16	Bell Atlantic
Bell Atlantic Trouble Ticket database extract (February 2000)	Feb00_tickets.xls	RMI-7-A-I-17	Bell Atlantic
Bell Atlantic Trouble Ticket database extract (March 2000)	Mar00_tickets.xls	RMI-7-A-I-18	Bell Atlantic
Bell Atlantic Trouble Ticket database extract (April 2000)	Apr00_tickets.xls	RMI-7-A-I-19	Bell Atlantic
Bell Atlantic – Massachusetts Master Test Plan Final Version 2.0 (November 24, 1999)	MA MTP Final Version 112499.pdf	RMI-7-A-II-20	KPMG Consulting
KPMG Consulting – Bell Atlantic Initial Data Request	Bassdatareq.doc	RMI-7-A-II-21	KPMG Consulting
RMI7 Peer Review	Rmi7testpak.doc	RMI-7-A-II-22	KPMG Consulting
KPMG Consulting – Bell Atlantic Supplemental Data Request	Lamartina_data.doc	RMI-7-A-II-23	KPMG Consulting
RMI7 Final Report	Hard Copy	RMI-7-A-II-24	KPMG Consulting
Closed Trouble Tickets Data Analysis	Rmi7_Closed_Analysis.xls	RMI-7-B-II-1	KPMG Consulting
BASS data request electronic mail	Hard Copy	RMI-7-A-III-25	KPMG Consulting
RMI7 Exit Peer Review Sign-off Letter	Hard Copy	RMI-7-A-II-25	KPMG Consulting
BASS data request electronic mail	Hard Copy	RMI-7-A-III-26	KPMG Consulting

#### 2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

#### 2.5 Evaluation Methods

The performance evaluation of the Bell Atlantic System Support (BASS) Help Desk was conducted using a series of interviews with BA-MA. Additional data was received from BA-MA, and KPMG Consulting analyzed the information gathered from the interviews and data.

The Test Manager performed the following steps in order to measure the timeliness of the closure posting process:

- ◆ Reviewed the closed trouble ticket database for obvious data anomalies
- ◆ Sorted the closed trouble ticket database by severity code:
  - Critical = Type 1, Severity 1
  - Major = Type 1, Severity 2
  - Minor = Type 1, Severity 3
- ◆ Reviewed the full closed trouble ticket database
- ◆ Sorted each data set by severity code into five closure posting intervals and quantified:
  1. Age = 0 (Closed same day)
  2. Age = 1 (Closed next day)
  3. Age = Closed 2-6 days
  4. Age = Closed 7-27 days
  5. Age = Closed 28+ days

#### 2.6 Analysis Methods

The System Administration Help Desk Performance Data Review included a checklist of evaluation criteria developed by the test manager during the initial phase of the Bell Atlantic-Massachusetts OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the System Administration Help Desk Performance Data Review.

The data collected were analyzed employing the evaluation criteria referenced above.

### 3.0 Results Summary

This section identifies the evaluation criteria and test results.

### 3.1 Results & Analysis

The results of this test are presented in the table below.

**Table 7-3: Results for System Administration Help Desk Performance Data Review**

Severity	Total Closed	Closed Same Day	Closed Next Day	Closed 2-6 Days	Closed 7-27 Days	Closed 28+ Days
Critical	1449	787 54%	114 8%	108 8%	235 16%	205 14%
Major	9	2 22%	1 11%	2 22%	2 22%	2 22%
Minor	8511	4800 56%	439 5%	825 10%	1946 23%	501 6%
TOTAL	9969	5589 56%	554 6%	935 9%	2183 22%	708 7%

There are several primary reasons for trouble tickets with greater than seven days closure, such as:

- ◆ a solution or fix for the issue raised by the trouble ticket is scheduled to be implemented in a new software release in the future.
- ◆ a CLEC does not respond to Bell Atlantic's request to close a trouble ticket even though the issue may have been addressed by Bell Atlantic.
- ◆ an issue was traced back to a CLEC originated problem, but the CLEC did not notify Bell Atlantic that the CLEC had addressed the issue internally.

No performance standards or guidelines to evaluate "acceptable" response time from initiation to closure of Help Desk calls were available for this test.



## **H. Test Results: System Administration Help Desk Verification and Validation Review (RMI8)**

### **1.0 Description**

The Bell Atlantic System Administration Help Desk Verification and Validation Review evaluated the Bell Atlantic System Support (BASS) Help Desk's call logging, severity coding, and closure posting practices compliance with internal rules and procedures (i.e., as previously evaluated in RMI6). This test relied upon checklists and inspections to validate the BASS Help Desk's application of procedures.

### **2.0 Methodology**

This section summarizes the test methodology.

#### **2.1 Business Process Description**

The BASS Help Desk records and responds to CLEC and Reseller questions or problems regarding connectivity and administration of their system interface with Bell Atlantic–Massachusetts (BA-MA). BA-MA procedure instructs the BASS Help Desk Call Agents to log all incoming calls in the BASS Help Desk database. Each new problem the BASS Help Desk answers generates a new trouble ticket number. The date the call was opened, along with other relevant customer information and a description of the problem and its resolution, are logged. Each trouble ticket is assigned a severity code (critical, major, minor, enhancement, or informational). Procedure also requires trouble tickets to be closed upon resolution and for a closure date to be entered into the database.

#### **2.2 Scenarios**

Scenarios were not applicable to this test.

#### **2.3 Test Targets & Measures**

The test target was the Bell Atlantic System Support Help Desk. Processes, sub-processes, evaluation measures, and associated test cross-reference numbers are summarized in the following table. The last column, "Test Cross-Reference," indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

**Table 8-1: Test Target Cross-Reference**

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Initiate Help Desk Call	User interface	Ease of use	RMI-8-1
Process Help Desk Call Processing	Call logging	Accuracy and completeness	RMI-8-2
Process Help Desk Call	Severity coding	Accuracy and completeness	RMI-8-3

## 2.4 Data Sources

The data collected for the test are summarized in the table below.

**Table 8-2: Data Sources for the System Administration Help Desk Verification and Validation Review**

Document	File Name	Location in Work Papers	Source
Bell Atlantic System Support Help Desk call logs	Hard Copy	RMI-8-A-I-1	Bell Atlantic
Bell Atlantic System Support Help Desk – ECD Call Log	Hard Copy	RMI-8-A-I-2	Bell Atlantic
Bell Atlantic System Support Help Desk – Trouble Ticket Database Extract	Dec-tickets.xls	RMI-8-A-I-3	Bell Atlantic
Bell Atlantic System Support Help Desk – Call Logging Procedures	Hard Copy	RMI-8-A-I-4	Bell Atlantic
Bell Atlantic – Massachusetts Master Test Plan Final Version 2.0 (November 24, 1999)	MA MTP Final Version 112499.pdf	RMI-8-A-II-5	KPMG Consulting
KPMG Consulting – Bell Atlantic Initial Data Request	Hard Copy	RMI-8-A-II-6	KPMG Consulting

Document	File Name	Location in Work Papers	Source
RMI8 Peer Review	Rmi8testpak.doc	RMI-8-A-II-7	KPMG Consulting
KPMG Consulting – Bell Atlantic Call Agent Interview Report	Rmi6_int_rep_VE.doc	RMI-8-A-II-8	KPMG Consulting
RMI8 Final Report	Hard Copy	RMI-8-A-II-9	KPMG Consulting
RMI8 Exit Peer Review Sign-off Letter	Hard Copy	RMI-8-A-II-10	KPMG Consulting

#### 2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

#### 2.5 Evaluation Methods

The evaluation of the Bell Atlantic System Support (BASS) Help Desk was determined through the analysis of data provided by BA-MA, a series of interviews, and a walkthrough-through.

#### 2.6 Analysis Methods

The System Administration Help Desk Verification and Validation Review included a checklist of evaluation criteria developed by the test manager during the initial phase of the Bell Atlantic-Massachusetts OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the System Administration Help Desk Verification and Validation Review.

The data collected were analyzed employing the evaluation criteria referenced above.

### 3.0 Results Summary

This section identifies the evaluation criteria and test results.

### 3.1 Results & Analysis

The results of this test are presented in the table below.

**Table 8-3: RMI8 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-8-1	System Support Help Desk interface is logically organized.	Satisfied	<p>The BASS Help Desk interface is logically organized for callers. The first available BASS Help Desk Call Agent will answer the next call waiting in the queue.</p> <p>Any calls to the Bell Atlantic System Support Help Desk outside the hours of operation are directed to a voice message system where the caller may leave a detailed message and a Bell Atlantic employee will be notified of the call via a page.</p>
RMI-8-2	Call logging procedures are complete.	Satisfied	<p>From the moment a call is received by the BASS Help Desk, it is tracked automatically in the Electronic Call Distribution (ECD) database. The ECD will capture the number of calls that reach the BASS Help Desk and is capable of generating information on call volumes. Information about the caller such as the company name, name of the caller, contact information, and nature of the call is keyed in by the BASS Help Desk Call Agent and is stored in the trouble ticket database.</p>
RMI-8-3	Calls to the Bell Atlantic System Support Help Desk are completely and accurately severity coded during the call logging procedure in compliance with documented procedures.	Satisfied	<p>Trouble tickets that are logged in the database are accurately severity coded with documented procedures. This severity coding procedure is part of the process that the BASS Help Desk Call Agent must follow to complete the trouble ticket that is to be issued. The severity coding will determine the urgency in resolving the trouble ticket.</p>

## I. Test Results: CLEC Training Verification and Validation Review (RMI9)

### 1.0 Description

The CLEC Training Verification and Validation Review evaluated aspects of Bell Atlantic-Massachusetts (BA-MA) CLEC Training. The objectives of the test were to determine the existence and functionality of procedures for developing, publicizing, conducting, managing, and monitoring CLEC training. Interviews and documentation reviews were conducted to evaluate BA-MA's CLEC Training.

### 2.0 Methodology

This section summarizes the test methodology.

#### 2.1 Business Process Description

BA-MA CLEC Training offers courses in various products and services available to CLECs. Training opportunities, along with dates, times, and locations of courses, are publicized through various media. CLECs can request on-site and customized training from BA-MA. BA-MA's CLEC Training organization holds classes, develops courses and curriculum, monitors instructors, and evaluates training effectiveness.

#### 2.2 Scenarios

Scenarios were not applicable to this test.

#### 2.3 Test Targets & Measures

The test target was Bell Atlantic–Massachusetts' CLEC Training program. Processes, sub-processes, evaluation measures, and associated test cross-reference numbers are summarized in the following table. The last column, "Test Cross-Reference," indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

**Table 9-1: Test Target Cross-Reference**

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Training Program Development	Develop curriculum	Completeness of training curriculum and forums	RMI-9-1, RMI-9-2, RMI-9-3, RMI-9-7, RMI-9-9
Training Program Development	Develop curriculum	Adequacy of procedures to respond to information about training quality and utilization	RMI-9-1, RMI-9-4, RMI-9-5, RMI-9-6, RMI-9-8, RMI-9-9, RMI-9-11, RMI-9-12

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Training Program Development	Develop curriculum	Adequacy of procedures to accept CLEC input regarding training curriculum	RMI-9-1, RMI-9-6, RMI-9-8, RMI-9-9, RMI-9-12
Training Program Development	Publicize training opportunities	Availability of information about training opportunities	RMI-9-1, RMI-9-10
Training Program Quality Assurance	Attendance/utilization tracking	Adequacy of process to track utilization and attendance of various training tools and forums	RMI-9-1, RMI-9-3, RMI-9-8, RMI-9-11, RMI-9-14
Training Program Quality Assurance	Session effectiveness tracking	Adequacy of process to survey training recipients on effectiveness of training	RMI-9-1, RMI-9-3, RMI-9-8, RMI-9-9, RMI-9-12
Training Program Quality Assurance	Instructor oversight	Adequacy of procedures to monitor instructor performance	RMI-9-1, RMI-9-3, RMI-9-5, RMI-9-6, RMI-9-9, RMI-9-12, RMI-9-13
Process Management	Performance measurement process	Controllability, efficiency and reliability of process	RMI-9-1, RMI-9-5, RMI-9-6, RMI-9-8, RMI-9-12
Process Management	Process improvement	Completeness of process improvement practices	RMI-9-1, RMI-9-4, RMI-9-8, RMI-9-12, RMI-9-13, RMI-9-14

## 2.4 Data Sources

The data collected for the test are summarized in the table below.

**Table 9-2: Data Sources for the CLEC Training Verification and Validation Review**

Document	File Name	Location in Work Papers	Source
Training course registration by student and by company	Hard Copy	RMI-9-A-I-1	Bell Atlantic
Training contact list by company	Hard Copy	RMI-9-A-I-2	Bell Atlantic

Document	File Name	Location in Work Papers	Source
Bell Atlantic response to “Validation and Verification letter”	Hard Copy	RMI-9-A-I-3	Bell Atlantic
Training and Education Evaluation Form	Hard Copy	RMI-9-A-I-4	Bell Atlantic
Bell Atlantic response to “Validation and Verification letter”	ForstnerKPMG.doc	RMI-9-A-I-5	Bell Atlantic
Select Screen Prints from training section of Bell Atlantic Wholesale Markets website	Hard Copy	RMI-9-A-I-6	Bell Atlantic
Bell Atlantic Survey Evaluations	1999 Evaluations.xls	RMI-9-A-I-7	Bell Atlantic
Bell Atlantic response to Interview Summary	Forstner_int_summ1.doc	RMI-9-A-I-8	Bell Atlantic
Bell Atlantic response to Process Validation	Hard Copy	RMI-9-A-I-9	Bell Atlantic
Bell Atlantic–Massachusetts Master Test Plan Final Version 2.0 (November 24, 1999)	MA MTP Final Version 112499.pdf	RMI-9-A-II-10	KPMG Consulting
RMI9 Peer Review	Rmi9testpak.doc	RMI-9-A-II-11	KPMG Consulting
Verification Checklist of Bell Atlantic Wholesale Markets website	Rmi9_web_verif.doc	RMI-9-A-II-12	KPMG Consulting
Verification Checklist of Bell Atlantic – Massachusetts CLEC Training Program	Rmi9_handbook_verif.doc	RMI-9-A-II-13	KPMG Consulting

Document	File Name	Location in Work Papers	Source
KPMG Consulting - Bell Atlantic Interview Report	Rmi9_int_rep_CF.doc	RMI-9-A-II-14	KPMG Consulting
KPMG Consulting – Bell Atlantic Interview Summary	Forstner_int_summ.doc	RMI-9-A-II-15	KPMG Consulting
KPMG Consulting – Bell Atlantic CLEC Training Interview Guide	Rmi9_int_gd.doc	RMI-9-A-II-16	KPMG Consulting
KPMG Consulting – Bell Atlantic CLEC Training Initial Data Request	Forstner_data.doc	RMI-9-A-II-17	KPMG Consulting
KPMG Consulting – Bell Atlantic CLEC Training “Validation and Verification” letter	Forstner_verif.doc	RMI-9-A-II-18	KPMG Consulting
Communications Log	Rmi9_comm_log.doc	RMI-9-A-II-19	KPMG Consulting
KPMG Consulting Final Report	Hard Copy	RMI-9-A-II-20	KPMG Consulting
KPMG Consulting – Bell Atlantic Verification of Bell Atlantic - Massachusetts CLEC Training Process	Rmi9_final_verif.doc	RMI-9-A-II-21	KPMG Consulting
RMI9 Exit Peer Review Sign-off Letter	Hard Copy	RMI-9-A-II-22	KPMG Consulting

#### 2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

#### 2.5 Evaluation Methods

The evaluation of BA-MA CLEC Training program was conducted through an analysis and review of documentation and data provided by BA-MA and an interview conducted with the Bell Atlantic CLEC Training program personnel.

## 2.6 Analysis Methods

The CLEC Training Verification and Validation Review included a checklist of evaluation criteria developed by the test manager during the initial phase of the Bell Atlantic-Massachusetts OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the CLEC Training Verification and Validation Review.

The data collected were analyzed employing the evaluation criteria referenced above.

## 3.0 Results Summary

This section identifies the evaluation criteria and test results.

### 3.1 Results & Analysis

The results of this test are presented in the table below.

**Table 9-3: RMI9 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
	<b>Procedural Consistency and Integrity:</b>		
RMI-9-1	Training responsibilities and activities are defined.	Satisfied	Training process responsibilities and activities are defined. The BA-MA CLEC Training team is responsible for defining processes and responsibilities. Some of these responsibilities include distributing and collecting feedback from trainees from training sessions, and providing support to trainees for a defined period of time after the training session. Bell Atlantic Account Managers, Methods and Procedures Team Members, and CLEC Training Team Members collaborate to create new processes.
RMI-9-2	Scope and objectives of training process are defined and documented.	Satisfied	Scope and objectives of training processes are defined and documented in the CLEC Handbook (March 2000, Volume I, Section 8.2), and the Resale Handbook (September 1999, Volume I, Section 7.1).

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-9-3	Essential elements of the training process are in place and documented.	Satisfied	Essential elements of the training process, including course materials, instructor and course evaluations, and notification of training opportunities are in place. Documentation includes course materials, evaluation guides, and notification of training opportunities.
RMI-9-4	The training process includes procedures for addressing errors and exceptions.	Satisfied	Feedback on errors may be addressed to the CLEC's Bell Atlantic Account Manager and/or the BA-MA CLEC Training Manager. Comments may also be recorded on the training and evaluation survey form made available at the end of each training session. The BA-MA CLEC Training Manager reviews and considers all comments and suggestions.
	<b>Performance Measurement and Reporting:</b>		
RMI-9-5	Training process performance measures are defined and measured.	Satisfied	Training process performance is evaluated with respect to course curriculum, course materials, instructor presentation, and instructor knowledge. One of the methods used to measure the training process performance measures is through a course survey.
RMI-9-6	Responsibilities for tracking performance are assigned.	Satisfied	The Bell Atlantic CLEC Training Manager tracks the performance and progression of instructors and course curriculum by reviewing student class evaluations, receiving feedback from BA-MA Account Managers, and observing training sessions.
	<b>Procedure Elements:</b>		
RMI-9-7	Scope of training services covers customer requirements.	Satisfied	BA-MA offers training for all major products. Training curriculum and courses may be customized upon request. If a request is prepared for on site training on CLEC premises, the BA-MA CLEC Training Manager will consider the request.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p>Training instructors will provide their contact information to the students and provide 30 days of support after the training session.</p> <p>To help Bell Atlantic meet customer requirements, surveys are handed out at the end of each training session to receive feedback from the trainees about the course material and instructor.</p>
RMI-9-8	Process includes procedures for responding to feedback about training quality and utilization.	Satisfied	<p>The BA-MA CLEC Training Manager will attend training sessions and review feedback from trainees to help assess different aspects of the training program. These aspects include whether the curriculum needs to be changed, new courses need to be created and scheduled, and/or instructors need to be substituted. Trainees may also send feedback to their respective BA-MA Account Manager.</p>
RMI-9-9	Process includes procedures for accepting CLEC input regarding training curriculum.	Satisfied	<p>A process does exist for accepting CLEC input regarding training. CLECs have several ways to provide input, this includes contacting their Bell Atlantic Account Manager, completing the course and instructor evaluations at the end of each training session, and/or corresponding directly with the BA-MA CLEC Training Manager.</p>
RMI-9-10	Process includes procedures for publishing information about training opportunities.	Satisfied	<p>Training course information is published and maintained on the Bell Atlantic Wholesale Markets website (<a href="http://www.bellatlantic.com/wholesale/html/ie_course_descr.htm">http://www.bellatlantic.com/wholesale/html/ie_course_descr.htm</a>), the CLEC Handbook (March 2000, Volume I, Section 8.2) and Reseller Handbook (September 1999, Volume I, Section 8.2). This information includes course descriptions, schedules, and training locations. The CLECs Bell Atlantic Account Manager(s) may also provide information for training opportunities.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-9-11	Process includes tool(s) to track training attendance.	Satisfied	Bell Atlantic maintains a database to track information about student attendance. This information consists of course names, companies, student names, and the total number of class attendants.
RMI-9-12	Process includes procedures to survey training recipients on effectiveness of training.	Satisfied	<p>Bell Atlantic has a survey procedure that allows students to comment on the effectiveness of the training. A survey is distributed to students at the end of the course.</p> <p>Several elements of the training are rated by students. These elements include course content, classroom materials, and overall satisfaction rating.</p> <p>In addition, the BA-MA CLEC Training Manager communicates with the Bell Atlantic Account Managers for any CLEC feedback.</p>
RMI-9-13	Process includes procedures to monitor instructor performance.	Satisfied	Bell Atlantic has a process to monitor and evaluate instructor performance. A performance evaluation of the instructor conducted by the BA-MA CLEC Training Manager is shared between the instructor and Manager. Student evaluations of training sessions and instructors are reviewed by the BA-MA CLEC Training Manager and stored for future references.
RMI-9-14	Training offerings are scalable in response to additional demand (e.g., increase class size, number of instructors).	Satisfied	There is a limit set to the size of each class. The Bell Atlantic instructors are cross-trained so they may be positioned to teach more or different courses depending on demand and class size.

## **J. Test Results: Forecasting Verification and Validation Review (RMI10)**

### **1.0 Description**

The objective of the Forecasting Verification and Validation Review was to evaluate aspects of the Bell Atlantic-Massachusetts (BA-MA) CLEC forecasting process. The objectives of the test were to determine the existence and functionality of procedures for developing, publicizing, conducting, and monitoring forecasting efforts and ensuring the overall forecasting effort has effective management oversight. Interviews and documentation reviews were conducted to evaluate BA-MA's CLEC forecasting process.

### **2.0 Methodology**

This section summarizes the test methodology.

#### **2.1 Business Process Description**

The CLEC local demand forecasting process is used by BA-MA to gather information from CLECs to anticipate future needs in several areas including interconnection trunks, collocation, unbundled network elements, and resold lines. Forecasts are used by BA-MA to properly size and locate network resources, as well as anticipate capacity requirements of the Operations Support System (OSS) and the Telecom Industry Services Operating Center (TISOC).

The schedule for forecasts is semi-annual. The forecasting process begins with an internal verification of the contact information for each CLEC with its BA-MA Account Manager. The appropriate contact is sent a standard letter requesting that the forecast be completed by the CLEC within six weeks time frame and returned electronically. This industry letter includes a diskette with copies of the forecasting forms and instructions on how to complete them.

Once the forecast is returned to BA-MA by the CLEC, it is reviewed using the process outlined in the BA- MA Demand Forecasting Workshop Class materials dated June 10, 1999. The review process includes developing high-level marketing assumptions, conducting a statistical analysis, utilizing third party research, reviewing actual demand and history (if available) and preparing product assumptions.

#### **2.2 Scenarios**

Scenarios were not applicable to this test.

#### **2.3 Test Targets & Measures**

The test target was BA-MA's CLEC local demand forecasting process. Processes, sub-processes, evaluation measures, and associated test cross-reference numbers are summarized in the following table. The last column, "Test Cross-Reference," indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

**Table 10-1: Test Target Cross-Reference**

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Forecasting development	Compliance with BA-MA documented forecasting procedures	Report review Inspection Document review	RMI-10-1, RMI-10-2, RMI-10-3, RMI-10-4, RMI-10-5, RMI-10-8
Forecast publication and confirmation	Availability of published forecast summaries	Inspection Document review	RMI-10-5, RMI-10-6, RMI-10-7, RMI-10-8, RMI-10-9

#### 2.4 Data Sources

The data collected for the test are summarized in the table below.

**Table 10-2: Data Sources for Forecasting Verification and Validation Review**

Document	File Name	Location in Work Papers	Source
RMI 10 MTP portion	Hard Copy	RMI-10-A-II-1	KPMG Consulting
RMI 10 Detail test plans	Hard Copy	RMI-10-A-II-2	KPMG Consulting
Peer Review Sign Off	Hard Copy	RMI-10-A-II-3	KPMG Consulting
Procedural Evaluation Criteria List	Hard Copy	RMI-10-A-II-4	KPMG Consulting
KPMG Forecasting Process verification letter	Hard Copy	RMI-10-A-II-5	KPMG Consulting
Revised - Forecasting Process verification letter - Response from Bell Atlantic	Hard Copy	RMI-10-A-II-6	BA-MA
Procedural Evaluation Results	Hard Copy	RMI-10-A-II-7	KPMG Consulting
KPMG Data Request (January 7, 2000)	Hard Copy	RMI-10-A-II-8	KPMG Consulting
Bell Atlantic's response to Data request (March 14, 2000)	Hard Copy	RMI-10-A-II-9	BA-MA

Document	File Name	Location in Work Papers	Source
Bell Atlantic CLEC Forecasting coordinator - Interview Guide	Hard Copy	RMI-10-A-II-10	KPMG Consulting
Bell Atlantic CLEC Forecasting coordinator – Response to Interview Summary	Hard Copy	RMI-10-A-II-11	KPMG Consulting
Bell Atlantic CLEC Forecasting coordinator – Response to Interview Summary	Hard Copy	RMI-10-A-II-12	BA-MA
Demand Forecasting Workshop Class Materials Verification Summary	Hard Copy	RMI-10-A-II-13	KPMG Consulting
CLEC Handbook Verification Summary	Hard Copy	RMI-10-A-II-14	KPMG Consulting
Resale Handbook Verification Summary	Hard Copy	RMI-10-A-II-15	KPMG Consulting
Website Verification Summary	Hard Copy	RMI-10-A-II-16	KPMG Consulting
Peer Exit Review	Hard Copy	RMI-10-A-II-17	KPMG Consulting
BA-MA Code of Business Conduct	Hard Copy	RMI-10-B-I-1	BA-MA
Demand Forecasting Workshop Class Materials, June 1999	Hard Copy	RMI-10-B-I-2	BA-MA
CLEC Handbook, Volumes 1 and 3 (March 2000 version)	Hard Copy	RMI-10-B-I-3	BA-MA

Document	File Name	Location in Work Papers	Source
Resale Handbook, Volume 1 (September 1999 version)	Hard Copy	RMI-10-B-I-4	BA-MA
Forecasting Industry Letter template	Hard Copy	RMI-10-B-I-5	BA-MA
Bell Atlantic Collocation template	Hard Copy	RMI-10-B-I-6	BA-MA
Bell Atlantic Trunk template	Hard Copy	RMI-10-B-I-7	BA-MA
Bell Atlantic Resale template	Hard Copy	RMI-10-B-I-8	BA-MA
Bell Atlantic UNE template	Hard Copy	RMI-10-B-I-9	BA-MA
E-mail correspondence between KPMG and BA	Hard Copy	RMI-10-B-I-10	BA-MA/KPMG Consulting

#### 2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

#### 2.5 Evaluation Methods

The following are some of activities that were performed as part of the Forecasting Verification and Validation Review:

- ◆ Review of Bell Atlantic documentation
- ◆ Interview with Bell Atlantic staff

#### 2.6 Analysis Methods

The Forecasting Verification and Validation Review included a checklist of evaluation criteria developed by the test manager during the initial phase of the Bell Atlantic-Massachusetts OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the Forecasting Verification and Validation Review.

The data collected were analyzed employing the evaluation criteria referenced above.

### 3.0 Results Summary

This section identifies the evaluation criteria and test results.

#### 3.1 Results & Analysis

The results of this test are presented in the table below.

**Table 10-3: RMI10 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-10-1	Forecasting process responsibilities and activities are defined.	Satisfied	The Forecasting process overview and the responsibilities of a CLEC/Reseller and Bell Atlantic are described in the CLEC Handbook (March 2000, Volume I, Section 8.3), Resale Handbook (September 1999, Volume I, Section 8.4) and Demand Forecasting Workshop Notes.
RMI-10-2	Scope and objectives of the forecasting process are defined and documented.	Satisfied	The scope and objectives of the Forecasting process are defined in the Demand Forecasting Workshop notes. The Workshop notes provide insight into the Forecasting processes and the use of data regarding trunking, collocation, UNE and Resale products.  Additional information is available in the CLEC Handbook (March 2000, Volume I, Section 8.3) and Resale Handbook (September 1999, Volume I, Section 8.4).
RMI-10-3	Essential elements of the forecasting process are in place and documented.	Satisfied	All the essential elements of the Forecasting process are documented.  The CLEC Handbook (March 2000, Volume I, Section 8.3.1) and Resale Handbook (September 1999, Volume I, Section 8.4) outlines major aspects of the Forecasting process. Furthermore, there is an explanation on the reasons for the Forecasting process and the potential impact of un-forecasted demand. A set of relevant forecast forms is also included in the Handbooks.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			The Demand Forecast workshop notes give a description of various issues including timelines for forecasting, review and feedback of data submitted, scope and screening process.
RMI-10-4	The forecasting process includes procedures for addressing errors and exceptions.	Satisfied	Procedures are in place to address errors and exceptions. The Bell Atlantic Account Manager is the main point of contact for a CLEC if there are errors and exceptions. This is documented in the Demand Forecasting Workshop notes.
RMI-10-5	Forms and templates are provided to facilitate data collection from CLECs and Resellers.	Satisfied	The forms and templates for Forecasting are provided by Bell Atlantic and are available from three different sources: <ul style="list-style-type: none"> <li>◆ Demand Forecasting Workshop Notes</li> <li>◆ Bell Atlantic Wholesale website (<a href="http://www.bellatlantic.com/wholesale/index.htm">http://www.bellatlantic.com/wholesale/index.htm</a>)</li> <li>◆ Diskettes sent by Bell Atlantic to the CLECs as part of the semi-annual Industry letter mailing, requesting carrier-specific forecasting data</li> </ul>
RMI-10-6	Data provided by each CLEC are confirmed and verified.	Satisfied	CLEC information is confirmed and verified in accordance with the process outlined in the Demand Forecasting Workshop materials.  As part of the review and verification process, the CLEC forecast information is analyzed by Bell Atlantic Product and Account Managers.
RMI-10-7	Bell Atlantic summaries of forecasts are distributed to CLECs in a timely manner.	Not Applicable	The forecast summaries are not distributed to any CLECs. Bell Atlantic uses the Forecast data internally for planning purposes. In addition, access to this proprietary information is tightly controlled.

Test Cross-Reference	Evaluation Criteria	Result	Comments
RMI-10-8	The process includes periodic requirements for forecast revision.	Satisfied	<p>The Forecasting process occurs semi-annually. There are some procedures that are revised on an as-needed basis.</p> <p>Bell Atlantic reviews the process and procedures for forecasting and applies process revisions as needed. During its review, Bell Atlantic examines areas such as streamlining or improving the forecasting process, assess documentation, and improving forecasting tools.</p>
RMI-10-9	Procedures are in place to ensure that confidentiality regarding proprietary CLEC information is maintained.	Satisfied	<p>Bell Atlantic personnel dealing with the Forecasting information are asked to annually sign a “Code of Conduct” to safeguard the confidentiality of CLEC information. This agreement prohibits Bell Atlantic employees from sharing confidential CLEC information with unauthorized external and internal parties such as Bell Atlantic’s Retail operations. The distribution of this information is strictly controlled and is used only internally for resource planning purposes.</p>



## A. Test Results: Performance Metrics Reporting Evaluation (PMR1)

### 1.0 Description

The Performance Metrics Reporting (PMR) Evaluation process was a comprehensive investigation of the procedures and systems used to calculate the retail and wholesale metrics for Bell Atlantic–Massachusetts' (BA-MA) Pre-Ordering, Ordering, Provisioning, Maintenance and Repair, Billing, Network Performance and Operator Services functions. The evaluation process used both operational and statistical analyses to perform a review of BA-MA's information processing, metrics calculation and reporting procedures. The PMR evaluation consists of three components:

1. Data Integrity Investigation – This investigation determined whether the appropriate data were being used in the calculations of the BA-MA metrics. Samples of data were analyzed to evaluate BA-MA's data filtering processes.
2. Metrics Validation – This validation aimed to ensure that BA-MA's performance metrics were calculated and reported accurately. Independent metrics calculations were performed for all metrics identified as part of the OSS test by the Massachusetts Department of Telecommunications and Energy ("DTE") for three separate months. The results of these metrics calculations were compared with BA-MA's metrics calculation results. In furtherance of the DTE's request, KPMG Consulting LLC ("KPMG Consulting") evaluated those metrics that were under development. For those metrics that were under development at the beginning of the test, KPMG ascertained the reasons for their being under development and followed BA-MA's development program, comparing what was achieved against target timelines committed to by BA-MA.
3. Transaction Test Report Generation – For the transaction test, the KPMG Consulting metrics team used the results in the validation stage to calculate metrics required by the POP, BLS, and M&R domain teams.

The PMR evaluation provides a description of the Data Integrity Investigation, Metrics Validation methods, and the Transaction Test Report Generation along with the status of all the Pre-Ordering, Ordering, Provisioning, Maintenance and Repair, Billing, Network Performance and Operator Services metrics for BA-MA. The comprehensive set of metrics consists of the metrics contained in the New York Carrier-to-Carrier ("NYC2C") Guidelines dated February 28, 2000, directed by the January 14, 2000 DTE Letter Order Attachment A to the *Master Test Plan*. Consistent with the DTE's judgment that the NYC2C Guidelines encompass what is reported in the Consolidated Arbitrations metrics, KPMG Consulting examined and evaluated BA-MA's performance based on the metrics contained in the NYC2C.

## 2.0 Methodology

This section summarizes the test methodology.

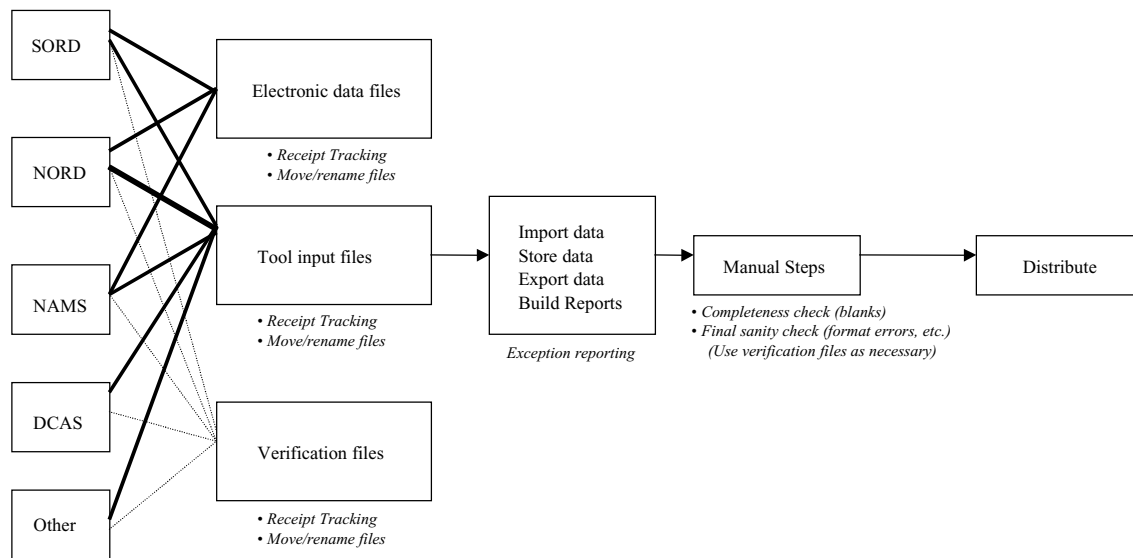
### 2.1 Business Process Description

The BA-MA process first gathers raw data on transactions, then filters the data, placing the results in databases. The C2C Report metrics are generated from the filtered databases. A depiction of the process flow from the databases to the C2C Reports may be found below.

In the diagram a few acronyms are used:

- ◆ SORD is Service Order Database
- ◆ NORD is Network Operations Database
- ◆ DCAS is Direct Carrier Access System
- ◆ NAMS is Network Analysis Measurement System.

**Figure 1-1: Carrier-to-Carrier Report Generation Process Flow 7-11-00**



#### 2.1.1 Pre-Ordering

The POP1 and POP2 reports describe BA-MA's Pre-Ordering process. PMR1 focuses on the data used by BA-MA to calculate the Pre-Ordering metrics in the C2C Report. BA-MA's EnView (formerly Sentinel) system generates the data used in the Pre-Ordering metrics calculations.

BA-MA developed the EnView system to monitor the internal Telecom Industry Services Operations Center (TISOC) systems response and availability times. EnView emulates Pre-Ordering CLEC transactions as well as BA-MA retail transactions. The NYC2C Guidelines mandate that BA-MA use the EnView system to calculate Pre-Ordering performance metrics.

The EnView system consists of two emulation programs, or “robots,” one running in Manchester, New Hampshire and one in Andover, Massachusetts. These robots process requests 24 hours a day, seven days a week. The robots process a minimum of 10 transactions per hour for each type of transaction, representing both CLEC requests and BA-MA retail requests.

The robots run pre-defined scripts requesting information as if it were being requested from a CLEC (which requires the request to go through the DCAS system) or from BA-MA retail representative (which requires the request to flow directly into the BA-MA system).

The transaction times used for the metrics reported in the C2C Report are monthly averages of the average daily transactions for each individual metric. Daily transactions are captured during normal BA-MA business hours, 8:00 a.m. – 6:00 p.m. Monday through Friday, excluding New Year’s Day, Memorial Day, July 4<sup>th</sup>, Labor Day, Thanksgiving Day, and Christmas Day.

The Pre-Order metrics calculated via the EnView system are recorded in the following manner:

- ◆ EnView mimics a clerk requesting pre-order transaction information (i.e., due date availability, address validation, Customer Service Record (CSR), product and service availability, telephone number availability and reservation);
- ◆ The response time for each EnView transaction is written to a log file.

### *2.1.1 Ordering*

The POP1, POP2, and POP3 reports describe BA-MA’s Ordering process. PMR1 reviews the systems used by BA-MA to calculate the ordering metrics in the C2C Reports. Ordering metrics calculations rely on transaction orders in the NORD reporting system. The data integrity investigation employs data in its rawest electronic form from the DCAS system.

### *2.1.3 Provisioning*

The POP1, POP2, and POP3 reports describe BA-MA’s Provisioning process. PMR1 reviews the systems used by BA-MA to calculate the provisioning metrics in the C2C Reports. Provisioning metrics are calculated from the SORD reporting system. The data integrity investigation relies on raw data from the Service Order Processing (SOP) system.

### *2.1.4 Maintenance and Repair*

The M&R reports describe BA-MA’s Maintenance and Repair process. PMR1 reviews the systems used by BA-MA to calculate the M&R metrics in the C2C Reports. M&R data enter the Loop Maintenance Operating System (LMOS) and the Work Force Administration (WFA)

System and continue through NSDB and NAMS. The Trouble Report Evaluation and Analysis Tool (TREAT) then processes data and combines information in the NORD system and ultimately produces results. M&R metrics calculations rely on transaction orders in the NORD reporting system. The data integrity investigation relies on raw data from the LMOS system.

#### 2.1.5 Billing

The Billing report describes BA-MA's Billing process. PMR1 reviews the systems used by BA-MA to calculate the Billing metrics in the C2C Report.

#### 2.1.6 Network Performance

PMR1 reviews the systems used by BA-MA to calculate the Network Performance metrics in the C2C Report. Collocation metrics are calculated from applications manually reported to the CBS/CNE system.

#### 2.1.7 Operator Services

PMR1 reviews the systems used by BA-MA to calculate the Operator Services metrics in the C2C Report. Operator Services metrics are manually calculated from quarter hour printouts from BA-MA's Force Management System ("FMS") at the Wholesale Call Center ("WCC") in Massachusetts.

### 2.2 Scenarios

Scenarios were not applicable to this test.

### 2.3 Test Targets & Measures

PMR1 examines the metrics gathering and reporting processes of the BA-MA OSS infrastructure. Each of the test targets below was examined during the course of the test, per the *Master Test Plan*. Processes, sub-processes, evaluation measures, and associated test cross-reference numbers are summarized in the following table. The last column, "Test Cross-Reference," indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

**Table 1-1: Test Target Cross-Reference**

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Data Integrity Investigation and Metrics Information Gathering Process	Identify BA-MA internal documentation	The policies and procedures of data collection are defined and documented.	PMR-1-1, PMR-1-2-1, PMR-1-3-1, PMR-1-4-1, PMR-1-5-1, PMR-1-6-1, PMR-1-7-1
Metrics Values Generated	Identify BA-MA published documentation	Technical guides describing data collected are available.	PMR-1-1-2, PMR-1-2-2, PMR-1-3-2, PMR-1-4-2, PMR-1-5-2, PMR-1-6-2, PMR-1-7-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Identify control points where measurements are taken	BA-MA is able to identify measurement control points.	PMR-1-1-3, PMR-1-2-3, PMR-1-3-3, PMR-1-4-3, PMR-1-5-3, PMR-1-6-3, PMR-1-7-3
	Identify data sources for reported metrics	BA-MA is able to identify exact points of data collection.	PMR-1-1-4, PMR-1-2-4, PMR-1-3-4, PMR-1-4-4, PMR-1-5-4, PMR-1-6-4, PMR-1-7-4
	Identify tool(s) used by BA-MA to collect data	BA-MA has adequate capacity to collect data.	PMR-1-1-5, PMR-1-2-5, PMR-1-3-5, PMR-1-4-5, PMR-1-5-5, PMR-1-6-5, PMR-1-7-5
	Evaluate BA-MA conversion of data from raw to filtered form	The values of selected filtered data, used to produce metrics, are consistent with the values of corresponding raw data.	PMR-1-1-6, PMR-1-2-6, PMR-1-3-6, PMR-1-4-6, PMR-1-5-6, PMR-1-6-6, PMR-1-7-6
	Evaluate BA-MA metrics calculations	BA-MA's computer code and algorithms are consistent with the metrics outlined in the NYC2C.	PMR-1-1-7, PMR-1-2-7, PMR-1-3-7, PMR-1-4-7, PMR-1-5-7, PMR-1-6-7, PMR-1-7-7
	Evaluate accuracy of BA-MA metrics calculations	BA-MA reported and KPMG Consulting calculated metrics values agree.	PMR-1-1-8, PMR-1-2-8, PMR-1-3-8, PMR-1-4-8, PMR-1-5-8, PMR-1-6-8, PMR-1-7-8
	Evaluate metrics reported in BA-MA C2C Report	BA-MA has included all metrics in the C2C Reports that it has agreed to provide.	PMR-1-1-9, PMR-1-2-9, PMR-1-3-9, PMR-1-4-9, PMR-1-5-9, PMR-1-6-9, PMR-1-7-9
	Evaluate BA-MA NYC2C Guidelines	BA-MA has adequate and complete NYC2C Guidelines.	PMR-1-1-10, PMR-1-2-10, PMR-1-3-10, PMR-1-4-10, PMR-1-5-10, PMR-1-6-10, PMR-1-7-10
	Evaluate BA-MA tools used in metrics calculations	BA-MA's tools used in metrics calculations are accurate and able to control housed data.	PMR-1-1-11, PMR-1-2-11, PMR-1-3-11, PMR-1-4-11, PMR-1-5-11, PMR-1-6-11, PMR-1-7-11

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Identify BA-MA change management control processes and procedures	BA-MA change management procedures are documented.	PMR-1-1-12, PMR-1-2-12, PMR-1-3-12, PMR-1-4-12, PMR-1-5-12, PMR-1-6-12, PMR-1-7-12
Transaction Test Report Generation	Evaluated metrics produced during the test period met the requirements as demonstrated by KPMG Consulting statistical tests	Metrics produced during the test period met the requirements as demonstrated by KPMG Consulting statistical tests.	PMR-1-1-13, PMR-1-2-13, PMR-1-3-13, PMR-1-4-13, PMR-1-5-13, PMR-1-6-13, PMR-1-7-13
	Evaluate consistency between BA-MA data regarding the KPMG Consulting test and the KPMG Consulting test results	BA-MA data regarding the KPMG Consulting test correctly reflects the KPMG Consulting test results.	PMR-1-1-14, PMR-1-2-14, PMR-1-3-14, PMR-1-4-14, PMR-1-5-14, PMR-1-6-14, PMR-1-7-14

## 2.4 Data Sources

The data collected for the test are summarized in the table below.

**Table 1-2: Data Sources for Performance Metrics Reporting Evaluation**

Document	File Name	Location in Work Papers	Source
	<b>References:</b>		
BA-MA Original and Revised C2C Reports for August 1999 through May 2000	Various Excel spreadsheet files reported for August 1999 through May 2000	CD-ROM titled “BA-MA Carrier-to-Carrier Reports”	BA-MA
11/15/99 New York State Carrier-to-Carrier Guidelines, Performance Standards and Reports	19991115NYC2C compliance.pdf	CD-ROM titled “DTE Documentation”	MA DTE
2/28/00 New York State Carrier-to-Carrier Guidelines, Performance Standards and Reports	Available in hard copy	Engagement work files	MA DTE

Document	File Name	Location in Work Papers	Source
Order 99-271 -- January 14, 2000 DTE Letter Order Attachment A	Attachment A.doc	CD-ROM titled “DTE Documentation”	MA DTE
Case 970-C-0139 – Order establishing additional C2C guidelines	Available in hard copy	CD-ROM titled “DTE Documentation”	MA DTE
Detailed Master Test Plan	Peerreviewed_PMR1.doc	CD-ROM titled “Detailed Master Test Plan”	KPMG Consulting
Change Control Documents	BA-MA Tracking Register documents	CD-ROM titled “Change Control”	BA-MA
Interview and Information Sessions Summaries and Notes	Various Word documents	CD-ROM titled “Interviews”	KPMG Consulting
Issues, Observations and Exceptions	Various Word documents and Adobe files	CD-ROM titled “Observations”	KPMG Consulting
Information Status Sheets	Various Excel spreadsheet files tracking data receipts	CD-ROM titled “Status Sheets”	KPMG Consulting
Interview Status Sheets	Various Excel spreadsheet files tracking interviews	CD-ROM titled “Status Sheets”	KPMG Consulting
Replication Status Sheets	Various Excel spreadsheet files tracking replication status	CD-ROM titled “Status Sheets”	KPMG Consulting
CLEC Comments and Conference Calls	Summaries of weekly CLEC conference calls and general CLEC comments	CD-ROM titled “CLEC Comments”	KPMG Consulting
Contact Information	Various Excel spreadsheet files Noting DTE and BA- MA contacts	CD-ROM titled “Contacts”	KPMG Consulting
	<b>Data Integrity Investigation:</b>		
BA-MA Ordering Data and algorithms	Various text files and Word documents	PMR-1-1-OR-OR-I	BA-MA
BA-MA/KPMG Consulting Ordering correspondence	Various documentation, electronic mail messages, data requests	PMR-1-1-OR-OR-II	KPMG Consulting

Document	File Name	Location in Work Papers	Source
KPMG Consulting Ordering programs and files	Various programs and files written by KPMG Consulting	PMR-1-1-OR-OR-III	KPMG Consulting
BA-MA Provisioning Data and algorithms	Various text files and Word documents	PMR-1-1-PR-PR-I	BA-MA
BA-MA/KPMG Consulting Provisioning correspondence	Various documentation, electronic mail messages, data requests	PMR-1-1-PR-PR-II	KPMG Consulting
KPMG Consulting Provisioning programs and files	Various programs and files written by KPMG Consulting	PMR-1-1-PR-PR-III	KPMG Consulting
BA-MA Maintenance and Repair Data and algorithms	Various text files and Word documents	PMR-1-1-MR-MR-I	BA-MA
BA-MA/KPMG Consulting Maintenance and Repair correspondence	Various documentation, electronic mail messages, data requests	PMR-1-1-MR-MR-II	KPMG Consulting
KPMG Consulting Maintenance and Repair programs and files	Various programs and files written by KPMG Consulting	PMR-1-1-MR-MR-III	KPMG Consulting
BA-MA Billing Data and algorithms	Various text files and Word documents	PMR-1-1-BI-BI-I	BA-MA
BA-MA/KPMG Consulting Billing correspondence	Various documentation, electronic mail messages, data requests	PMR-1-1-BI-BI-II	KPMG Consulting
KPMG Consulting Billing programs and files	Various programs and files written by KPMG Consulting	PMR-1-1-BI-BI-III	KPMG Consulting
	<b>Metrics Validation:</b>		
Metrics Under Development	Various Excel spreadsheet files tracking metrics under development	CD-ROM titled “Metrics Under Development”	KPMG Consulting
BA-MA Pre-Ordering Data and algorithms	Various text files and Word documents	PMR-1-2-PO-PO-I	BA-MA
BA-MA/KPMG Pre-Ordering correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-PO-PO-II	KPMG Consulting

Document	File Name	Location in Work Papers	Source
KPMG Consulting Pre-Ordering programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-PO-PO-III	KPMG Consulting
BA-MA Pre-Ordering (Interface Availability) Data and algorithms	Various text files and Word documents	PMR-1-2-PO-IA-I	BA-MA
BA-MA/KPMG Consulting Pre-Ordering (Interface Availability) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-PO-IA-II	KPMG Consulting
KPMG Consulting Pre-Ordering (Interface Availability) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-PO-IA-III	KPMG Consulting
BA-MA Pre-Ordering (Contact Center Availability) Data and algorithms	Various text files and Word documents	PMR-1-2-PO-CC-I	BA-MA
BA-MA/KPMG Consulting Pre-Ordering (Contact Center Availability) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-PO-CC-II	KPMG Consulting
KPMG Consulting Pre-Ordering (Contact Center Availability) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-PO-CC-III	KPMG Consulting
BA-MA Pre-Ordering (Change Management) Data and algorithms	Various text files and Word documents	PMR-1-2-PO-CM-I	BA-MA
BA-MA/KPMG Consulting Pre-Ordering (Change Management) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-PO-CM-II	KPMG Consulting
KPMG Consulting Pre-Ordering (Change Management) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-PO-CM-III	KPMG Consulting
BA-MA Pre-Ordering (Interface Outage) Data and algorithms	Various text files and Word documents	PMR-1-2-PO-IO-I	BA-MA

Document	File Name	Location in Work Papers	Source
BA-MA/KPMG Consulting Pre-Ordering (Interface Outage) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-PO-IO-II	KPMG Consulting
KPMG Consulting Pre-Ordering (Interface Outage) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-PO-IO-III	KPMG Consulting
BA-MA Ordering Data and algorithms	Various text files and Word documents	PMR-1-2-OR-OR-I	BA-MA
BA-MA/KPMG Consulting Ordering correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-OR-OR-II	KPMG Consulting
KPMG Consulting Ordering programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-OR-OR-III	KPMG Consulting
BA-MA Service Order Accuracy Data and algorithms	Various text files and Word documents	PMR-1-2-OR-SA-I	BA-MA
BA-MA/KPMG Consulting Service Order Accuracy correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-OR-SA-II	KPMG Consulting
KPMG Consulting Service Order Accuracy programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-OR-SA-III	KPMG Consulting
BA-MA Ordering (Fax-Mail) Data and algorithms	Various text files and Word documents	PMR-1-2-OR-FO-I	BA-MA
BA-MA/KPMG Consulting Ordering (Fax-Mail) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-OR-FO-II	KPMG Consulting
KPMG Consulting Ordering (Fax-Mail) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-OR-FO-III	KPMG Consulting
BA-MA Ordering (Trunks) Data and algorithms	Various text files and Word documents	PMR-1-2-OR-TR-I	BA-MA

Document	File Name	Location in Work Papers	Source
BA-MA/KPMG Consulting Ordering (Trunks) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-OR-TR-II	KPMG Consulting
KPMG Consulting Ordering (Trunks) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-OR-TR-III	KPMG Consulting
BA-MA Provisioning Data and algorithms	Various text files and Word documents	PMR-1-2-PR-PR-I	BA-MA
BA-MA/KPMG Consulting Provisioning correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-PR-PR-II	KPMG Consulting
KPMG Consulting Provisioning programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-PR-PR-III	KPMG Consulting
BA-MA Provisioning (Hotcuts) Data and algorithms	Various text files and Word documents	PMR-1-2-PR-HC-I	BA-MA
BA-MA/KPMG Consulting Provisioning (Hotcuts) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-PR-HC-II	KPMG Consulting
KPMG Consulting Provisioning (Hotcuts) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-PR-HC-III	KPMG Consulting
BA-MA Provisioning (Local Network Portability) Data and algorithms	Various text files and Word documents	PMR-1-2-PR-LP-I	BA-MA
BA-MA/KPMG Consulting Provisioning (Local Network Portability) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-PR-LP-II	KPMG Consulting
KPMG Consulting Provisioning (Local Network Portability) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-PR-LP-III	KPMG Consulting
BA-MA Provisioning (Trunks) Data and algorithms	Various text files and Word documents	PMR-1-2-OR-TR-I	BA-MA

Document	File Name	Location in Work Papers	Source
BA-MA/KPMG Consulting Provisioning (Trunks) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-OR-TR-II	KPMG Consulting
KPMG Consulting Provisioning (Trunks) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-OR-TR-III	KPMG Consulting
BA-MA Maintenance and Repair (POTS) Data and algorithms	Various text files and Word documents	PMR-1-2-MR-PT-I	BA-MA
BA-MA/KPMG Consulting Maintenance and Repair (POTS) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-MR-PT-II	KPMG Consulting
KPMG Consulting Maintenance and Repair (POTS) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-MR-PT-III	KPMG Consulting
BA-MA Maintenance and Repair (Specials) Data and algorithms	Various text files and Word documents	PMR-1-2-MR-SP-I	BA-MA
BA-MA/KPMG Consulting Maintenance and Repair (Specials) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-MR-SP-II	KPMG Consulting
KPMG Consulting Maintenance and Repair (Specials) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-MR-SP-III	KPMG Consulting
BA-MA Maintenance and Repair (Line Count) Data and algorithms	Various text files and Word documents	PMR-1-2-MR-LC-I	BA-MA
BA-MA/KPMG Consulting Maintenance and Repair (Line Count) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-MR-LC-II	KPMG Consulting

Document	File Name	Location in Work Papers	Source
KPMG Consulting Maintenance and Repair (Line Count) programs and files	Various programs and files written by KPMG Consulting	PMR1-2-MR-LC-III	KPMG Consulting
BA-MA Maintenance and Repair (Caseworker) Data and algorithms	Various text files and Word documents	PMR-1-2-MR-CW-I	BA-MA
BA-MA/KPMG Consulting Maintenance and Repair (Caseworker) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-MR-CW-II	KPMG Consulting
KPMG Consulting Maintenance and Repair (Caseworker) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-MR-CW-III	KPMG Consulting
BA-MA Maintenance and Repair (RETAS) Data and algorithms	Various text files and Word documents	PMR-1-2-MR-RS-I	BA-MA
BA-MA/KPMG Consulting Maintenance and Repair (RETAS) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-MR-RS-II	KPMG Consulting
KPMG Consulting Maintenance and Repair (RETAS) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-MR-RS-III	KPMG Consulting
BA-MA Maintenance and Repair (Trunks) Data and algorithms	Various text files and Word documents	PMR-1-2-MR-TR-I	BA-MA
BA-MA/KPMG Consulting Maintenance and Repair (Trunks) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-MR-TR-II	KPMG Consulting
KPMG Consulting Maintenance and Repair (Trunks) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-MR-TR-III	KPMG Consulting

Document	File Name	Location in Work Papers	Source
BA-MA Billing (DUF Timeliness) Data and algorithms	Various text files and Word documents	PMR-1-2-BI-DF-I	BA-MA
BA-MA/KPMG Consulting Billing (DUF Timeliness) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-BI-DF-II	KPMG Consulting
KPMG Consulting Billing (DUF Timeliness) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-BI-DF-III	KPMG Consulting
BA-MA Billing (Carrier Bill) Data and algorithms	Various text files and Word documents	PMR-1-2-BI-CB-I	BA-MA
BA-MA/KPMG Consulting Billing (DUF Carrier Bill) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-BI-CB-II	KPMG Consulting
KPMG Consulting Billing (DUF Carrier Bill) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-BI-CB-III	KPMG Consulting
BA-MA Billing (Accuracy) Data and algorithms	Various text files and Word documents	PMR-1-2-BI-AC-I	BA-MA
BA-MA/KPMG Consulting Billing (Accuracy) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-BI-AC-II	KPMG Consulting
KPMG Consulting Billing (Accuracy) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-BI-AC-III	KPMG Consulting
BA-MA Network Performance (Trunk Group Blockage) Data and algorithms	Various text files and Word documents	PMR-1-2-NP-GB-I	BA-MA
BA-MA/KPMG Consulting Network Performance (Trunk Group Blockage) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-NP-GB-II	KPMG Consulting

Document	File Name	Location in Work Papers	Source
KPMG Consulting Network Performance (Trunk Group Blockage) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-NP-GB-III	KPMG Consulting
BA-MA Network Performance (Collocation Performance) Data and algorithms	Various text files and Word documents	PMR-1-2-NP-CP-I	BA-MA
BA-MA/KPMG Consulting Network Performance (Collocation Performance) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-NP-CP-II	KPMG Consulting
KPMG Consulting Network Performance (Collocation Performance) programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-NP-CP-III	KPMG Consulting
BA-MA Operator Services Data and algorithms	Various text files and Word documents	PMR-1-2-OP-OP-I	BA-MA
BA-MA/KPMG Consulting Operator Services correspondence	Various documentation, electronic mail messages, data requests	PMR-1-2-OP-OP-II	KPMG Consulting
KPMG Consulting Operator Services programs and files	Various programs and files written by KPMG Consulting	PMR-1-2-OP-OP-III	KPMG Consulting
	<b>Transaction Test Report Generation:</b>		
BA-MA Pre-Ordering Data and algorithms	Various text files and Word documents	PMR-1-3-PO-PO-I	BA-MA
BA-MA/KPMG Consulting Pre-Ordering correspondence	Various documentation, electronic mail messages, data requests	PMR-1-3-PO-PO-II	KPMG Consulting
KPMG Consulting Pre-Ordering programs and files	Various programs and files written by KPMG Consulting	PMR-1-3-PO-PO-III	KPMG Consulting

Document	File Name	Location in Work Papers	Source
BA-MA Ordering Data and algorithms	Various text files and Word documents	PMR-1-3-OR-OR-I	BA-MA
BA-MA/KPMG Consulting Ordering correspondence	Various documentation, electronic mail messages, data requests	PMR-1-3-OR-OR-II	KPMG Consulting
KPMG Consulting Ordering programs and files	Various programs and files written by KPMG Consulting	PMR-1-3-OR-OR-III	KPMG Consulting
BA-MA Provisioning Data and algorithms	Various text files and Word documents	PMR-1-3-PR-PR-I	BA-MA
BA-MA/KPMG Consulting Provisioning correspondence	Various documentation, electronic mail messages, data requests	PMR-1-3-PR-PR-II	KPMG Consulting
KPMG Consulting Provisioning programs and files	Various programs and files written by KPMG Consulting	PMR-1-3-PR-PR-III	KPMG Consulting
BA-MA Maintenance and Repair (RETAS) Data and algorithms	Various text files and Word documents	PMR-1-3-MR-MR-I	BA-MA
BA-MA/KPMG Consulting Maintenance and Repair (RETAS) correspondence	Various documentation, electronic mail messages, data requests	PMR-1-3-MR-MR-II	KPMG Consulting
KPMG Consulting Maintenance and Repair (RETAS) programs and files	Various programs and files written by KPMG Consulting	PMR-1-3-MR-MR-III	KPMG Consulting

#### 2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

### 2.5 Evaluation Methods

#### 2.5.1 Data Integrity Investigation

KPMG Consulting's Data Integrity Investigation was limited to the internal investigation of BA-MA's data. KPMG Consulting verified that the "raw" data, once in the system, went through the proper transformations before being used for reporting purposes. The accuracy of the raw data itself was not verified, except during the transaction test, where it was only indirectly verified.

The Data Integrity Investigation utilized the raw data collection points as identified in the collection and storage of data tests. Orders and troubles submitted to BA-MA are collected in several of their raw data systems. Certain raw data systems create records or logs that were extracted and analyzed for the Data Integrity Investigation.

KPMG Consulting took stratified random samples of transactions, including BA-MA retail and CLEC orders and troubles, based upon the data used in the calculation of metrics. Samples were taken from the Provisioning, Ordering, and Maintenance & Repair domains. These data, referred to as "filtered" data, have been processed by BA-MA information systems. BA-MA identifies filtered data as the data that are processed from the last data collection point within its information systems. These data are different than the data entered at its first collection point within BA-MA systems, due to exclusions, interim calculations, and possibly processing errors. The objective of the Data Integrity Investigation was to identify if data were changed due to processing errors.

Based on the KPMG Consulting samples, BA-MA extracted and provided from its systems certain raw data fields that were used in the calculation of metrics. "Raw" data are taken from the first possible electronic collection point. These raw data were compared with the filtered data for evaluation of their accuracy, applicability, and completeness. For some of the data used in the calculation of Pre-Ordering, Provisioning Trunks and Billing Metrics, BA-MA only maintains the data in its raw form. For these metrics, samples were not taken by KPMG Consulting since the integrity of the data was investigated during Metrics Validation.

In order to improve KPMG Consulting's understanding of BA-MA's information processing techniques, KPMG Consulting conducted interviews with BA-MA personnel. Since BA-MA shares many essential systems with other Bell Atlantic state jurisdictions, KPMG Consulting avoided, when possible, duplicating interviews with BA-MA personnel interviewed as part of other jurisdictional system investigations. These interviews allowed KPMG Consulting to acquire detailed information on BA-MA's data collection, data filtering, and reporting processes. The information gained from these interviews also enabled KPMG Consulting to perform thorough quantitative analyses on BA-MA's reported metrics.

#### *2.5.2 Metrics Validation*

KPMG Consulting attempted to validate BA-MA's metric reports by replicating the reported values. Prior to validating BA-MA's metric reports, KPMG Consulting received the following three items from BA-MA:

- ◆ Carrier-to-Carrier ("C2C") Reports for December 1999, January 2000 and February 2000.
- ◆ Actual data used for metrics calculations in the C2C Reports.
- ◆ Generally understood algorithms that allow KPMG Consulting to replicate all of BA-MA's metric values reported in the C2C Reports.

Upon receipt of the three items listed above, KPMG Consulting conducted “military-style” testing to reconcile any differences in the replicated metric values prior to the completion of the test. Specifically, KPMG Consulting evaluated the accuracy and completeness of BA’s calculations of metrics for December 1999, January 2000 and February 2000. KPMG Consulting developed programs for metrics replication as needed and replicated the values of selected metrics in reports. KPMG Consulting then performed “military-style” testing of BA-MA’s metric reports by reconciling the reported, non-replicated metric values with BA-MA. For this purpose, KPMG Consulting developed its own computer code of the algorithms based on BA-MA’s descriptions.

KPMG Consulting then reviewed the NYC2C Guidelines for the test period to verify their completeness and adequacy. KPMG Consulting also compared the C2C Reports for the test period to those NYC2C Guidelines to verify that BA-MA had included all metrics that it had agreed to provide.

PMR1 also evaluated the processes by which BA-MA manages changes to coding and metrics calculations and BA-MA’s communication of these changes to other parties. This test evaluated the implementation, tracking and documentation of changes made to metrics from December 1999 through February 2000.

### *2.5.3 Transaction Test Report Generation*

BA-MA provided daily filtered data for Pre-Ordering, Ordering, and Provisioning for the period during the KPMG Consulting transaction testing. KPMG Consulting compared BA-MA’s filtered data to the data collected by KPMG Consulting’s transaction test team during the period of the test. The criteria used to evaluate the accuracy of BA-MA filtered data was the completeness and consistency of date and time stamp measures.

Using standard statistical methods, KPMG Consulting investigated BA-MA’s performance for the transaction tests based on the NYC2C performance standards. Analysis compared transaction test metrics to benchmark standards or retail standards when appropriate.

### *2.6 Analysis Methods*

The Performance Metrics Reporting Evaluation included a checklist of evaluation criteria developed by the test manager during the initial phase of the Bell Atlantic-Massachusetts OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the Performance Metrics Reporting Evaluation.

The data collected were analyzed employing the evaluation criteria referenced above.

### *3.0 Results Summary*

This section identifies the evaluation criteria and test results.

### 3.1 Results & Analysis

The results of this PMR test are presented in the tables below.

#### 3.1.1 Data Integrity Investigation

As part of the Data Integrity Investigation, KPMG Consulting attempted to match BA-MA raw data fields to filtered data fields for randomly sampled orders and troubles to evaluate the accuracy and completeness of BA-MA's data filtering process. For the samples used in the investigation, KPMG Consulting requested from BA-MA all data fields necessary to calculate the appropriate metrics. For the investigation, KPMG Consulting was able to match 99.5% of the metrics fields sampled.

##### 3.1.1.1 Pre-Ordering

It was not necessary to sample raw data for the Pre-Ordering data integrity investigation since Metrics Validation employs the raw data (EnView log files) generated from the EnView system to calculate Pre-Ordering metrics.

**Table 1-3: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-1-1	The policies and procedures of data collection are defined and documented.	Satisfied	BA-MA provided detailed flowcharts and data collection and storage descriptions of the Pre-Ordering EnView systems during interviews in December 1999 and January 2000. BA-MA's data collection policies are defined and documented.
PMR-1-1-2	Technical guides describing data collected are available.	Satisfied	BA-MA provided explanations of data collected from the EnView systems during interviews in December 1999 and January 2000. Additionally, BA-MA provided an EnView Processes chart and an EDI/EcXpert Process chart which describe in detail the data collected.
PMR-1-1-3	BA-MA is able to identify measurement control points.	Satisfied	BA-MA described in interviews and provided the EnView Report Process chart which details the measurement control process. The EnView Report Process identifies all measurement control points in the system.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-1-4	BA-MA is able to identify exact points of data collection.	Satisfied	Based on interviews and documentation, BA-MA identified exact points of data collection. From December 1999 through January 2000, BA-MA collected data in the EcXpert interface box for both retail and resale transactions. After January 2000, BA-MA employed EnView systems to collect retail data.
PMR-1-1-5	BA-MA has adequate capacity to collect data.	Satisfied	Based upon interviews and the EnView Data Storage document received, BA-MA demonstrated that it has computer storage servers and PC computers in place that have sufficient hardware capacity in place to collect data.
PMR-1-1-6	The values of selected filtered data, used to produce metrics, are consistent with the values of corresponding raw data.	Not Applicable	The BA-MA Pre-Ordering data used in the calculation of metrics is already in its rawest form. Data integrity was not performed in this domain.

### 3.1.1.2 Ordering

For the Ordering Data Integrity Investigation, KPMG Consulting requested a sample of November records containing 11 data fields from the BA-MA's point of raw data collection. BA-MA provided raw data files from its DCAS information processing system. KPMG Consulting attempted to match the samples of raw and filtered data by extracting the requested fields from the raw data files.

**Table 1-4: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-2-1	The policies and procedures of data collection are defined and documented.	Satisfied	BA-MA provided documents on metrics data collection and storage entitled "MA Ordering Metrics.doc" and "dcas_m_data_extract.doc." In the documents, BA-MA illustrates the Ordering data extraction process, the validation and formatting of Ordering data, the extraction of purchase order numbers, and the generation of metrics reports.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-2-2	Technical guides describing data collected are available.	Satisfied	BA-MA provided detailed documentation on data collection in the documents entitled “Ord Metrics Process Flow MA.ppt.” and “dcas_m_data_extract.doc.”
PMR-1-2-3	BA-MA is able to identify measurement control points.	Satisfied	Based upon BA-MA flowcharts and documentation that illustrate how data flows through BA-MA systems, BA-MA identified the points of measurement control. Data flows from the DCAS system in its rawest electronic form through to the SORD reporting system. Ordering metrics are calculated from data in SORD. Details on measurement control points are provided in the documents entitled “Ord Metrics Process Flow MA.ppt” and “dcas_m_data_extract.doc.”
PMR-1-2-4	BA-MA is able to identify exact points of data collection.	Satisfied	Based upon BA-MA flowcharts and documentation that illustrate how data flows through BA-MA systems, BA-MA identified exact points of data collection. Data flows from the DCAS system in its rawest electronic form through to the SORD reporting system. Ordering metrics are calculated from data in SORD. Details on points of data collection are provided in the documents entitled “Ord Metrics Process Flow MA.ppt” and “dcas_m_data_extract.doc.”
PMR-1-2-5	BA-MA has adequate capacity to collect data.	Satisfied	Based on interviews and documentation reviewed of the DCAS and SORD systems, BA-MA demonstrated that it has the capacity to collect data. Data flows from the DCAS system in its rawest electronic form through to the SORD reporting system. Ordering metrics are calculated from data in SORD. Refer to the documents entitled “Ord Metrics Process Flow MA.ppt” and “dcas_m_data_extract.doc” for detail on BA-MA’s capacity to collect data.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-2-6	The values of selected filtered data, used to produce metrics, are consistent with the values of corresponding raw data.	Satisfied	<p>BA-MA filtered data was consistent with the corresponding raw data for the 11 fields sampled. Only two records out of a total of 3,223 could not be matched which does not invalidate the otherwise successful outcome of the test.</p> <p>Raw data were not available for Service Order Accuracy metrics. Only hard copies of data support the sampled orders in the Excel spreadsheets. To create the 60 daily samples, BA-MA information services generates a random list (in electronic form) which includes the purchase order number (“PON”) and the service order number for each order sampled. BA-MA pulls PONs and service orders from DCAS, but there is no electronic copy of the DCAS system. Back-up paper copies of the Local Service Request (LSR) samples can be retrieved manually. Paper copies are retained for approximately 7-8 months, and there is no policy in effect for the storage of data. Consequently, a data integrity analysis was not performed on the Service Order Accuracy metrics.</p>

### 3.1.1.3 Provisioning

For the Provisioning Data Integrity Investigation, KPMG Consulting requested a sample from February of 285 records and 20 fields from BA-MA’s raw point of data collection in the SOP system. BA-MA provided KPMG Consulting with raw service order images to verify each record against the filtered data.

*Table 1-5: PMR1 Evaluation Criteria and Results*

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-3-1	The policies and procedures of data collection are defined and documented.	Satisfied	The policies and procedures of data collection are described in manuals for the SOP and SORD systems. Description of the policies and procedures of data collection are contained in the documents entitled “SOP – Summary BA-reply.doc” and “MASS – KPMG REPLY.doc.”
PMR-1-3-2	Technical guides describing data collected are available.	Satisfied	Technical guides maintained by the SOP system team are available describing file layouts and the manner in which data is collected and reported. The flowchart titled “Description of Service Order Reply Database Architecture” provides a description of the data collected in the SORD system.
PMR-1-3-3	BA-MA is able to identify measurement control points.	Satisfied	Based on SOP and SORD documentation, BA-MA described and identified control points for checking errors and validating data which is reported.
PMR-1-3-4	BA-MA is able to identify exact points of data collection.	Satisfied	BA-MA described during interviews the points of data collection in the SOP and SORD system. Description of the exact points of data collection are contained in the documents entitled “SOP – Summary BA-reply.doc” and “MASS – KPMG REPLY.doc.”
PMR-1-3-5	BA-MA has adequate capacity to collect data.	Satisfied	Based on interviews and documentation received, BA-MA has adequate capacity to collect data. The SOP system has the capacity to store data for up to 2 years. Individual service records are archived for up to 7 years and made available online. Description of BA-MA’s capacity to collect data is contained in the documents entitled “SOP – Summary BA-reply.doc” and “MASS – KPMG REPLY.doc.”

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-3-6	The values of selected filtered data, used to produce metrics, are consistent with the values of corresponding raw data.	Satisfied	The majority of BA-MA filtered data was consistent with the corresponding raw data for the 20 fields sampled. Forty-six records out of a total of 5700 could not be matched. The field with the largest number of inconsistencies, Number of New Lines, failed to match the filtered data for less than 10% of records sampled. The successful conclusion of the test was warranted by the accuracy of the fields most essential to metrics calculation.

#### 3.1.1.4 Maintenance and Repair POTS

For the Maintenance & Repair POTS Data Integrity Investigation, KPMG Consulting requested a sample of November records containing 15 fields from the rawest collection point of data. BA-MA provided KPMG Consulting with raw data files from the LMOS system to verify each record against the filtered data. KPMG Consulting was able to match all fields analyzed for the investigation.

**Table 1-6: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-4-1	The policies and procedures of data collection are defined and documented.	Satisfied	BA-MA maintenance and repair staff maintains the M&R Technical Manual that BA-MA utilizes in New York to describe policies and procedures used to collect data. The technical guide and the processing of data are basically the same for both Massachusetts and New York. The guide describes in sufficient detail the process whereby data enters the LMOS and WFA systems used for generating M&R metric data.
PMR-1-4-2	Technical guides describing data collected are available.	Satisfied	The technical guide maintained by BA-MA maintenance and repair staff describes the data collected in its Flowcharts and Sample Reports section.
PMR-1-4-3	BA-MA is able to identify measurement control points.	Satisfied	Based on interviews with BA-MA, BA-MA maintenance and repair staff are able to identify the measurement points in the NORD database system used to calculate M&R metrics.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-4-4	BA-MA is able to identify exact points of data collection.	Satisfied	The BA-MA flowchart of system processes identifies exact points of data collection.
PMR-1-4-5	BA-MA has adequate capacity to collect data.	Satisfied	BA-MA systems used to collect data, LMOS, NAMS, WFA/DI, and WFA/DO, have the capacity to collect all necessary data.
PMR-1-4-6	The values of selected filtered data, used to produce metrics, are consistent with the values of corresponding raw data.	Satisfied	BA-MA raw data matched filtered data for all fields essential to metric accuracy.  The BA-MA Caseworker and RETAS Trouble Reporting data used in the calculation of metrics was already in its rawest form. A data integrity analysis was not performed on these metrics.

### 3.1.1.5 Billing

KPMG Consulting requested from BA-MA raw data for the Billing metrics and verified that the appropriate data were being used for the metrics calculations. BA-MA provided KPMG Consulting with raw data and algorithms for the Billing Accuracy and Daily Usage Feed metrics. The data used for the calculation of the Timeliness of Carrier Bill metric was already in its rawest form.

**Table 1-7: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-5-1	The policies and procedures of data collection are defined and documented.	Satisfied	BA-MA documentation describes the automated process for collecting daily usage feed data into the Reseller, Uncollected Toll, and Toll Calls files. For Billing Accuracy and Timeliness metrics, the BA-MA documentation describes the manual process and procedures for logging data into spreadsheet files.
PMR-1-5-2	Technical guides describing data collected are available.	Satisfied	BA-MA technical guides describe the data collected in the mainframe, spreadsheet and other hardware systems that house billing data.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-5-3	BA-MA is able to identify measurement control points.	Satisfied	BA-MA source code for processing data identifies the points of measurement control. Refer to source processing document “nesas_sas4jcl.txt” for detail on measurement control points.
PMR-1-5-4	BA-MA is able to identify exact points of data collection.	Satisfied	During interviews of the CRIS and CABS system, BA-MA provided a description and documentation entitled “Gnrlresp.doc” that identify the exact points of data collection.
PMR-1-5-5	BA-MA has adequate capacity to collect data.	Satisfied	BA-MA houses the raw data on a mainframe system, which has sufficient capacity to collect and store data. Refer to documents entitled “Contents.doc” and “Filedes.doc” for detail on BA-MA’s capacity to collect and store data.
PMR-1-5-6	The values of selected filtered data, used to produce metrics, are consistent with the values of corresponding raw data.	Satisfied	The BA-MA manual filtering process for the Billing Accuracy metric produces values of raw data consistent with the values of the corresponding filtering data. The BA-MA Daily Usage Feed raw data housed on their mainframe systems is consistent with the values of corresponding filtered data. Data used for the calculation of the Timeliness of Carrier Bill is already in its rawest form.

### 3.1.1.6 Network Performance

It was not necessary to sample raw data for the Network Performance Data Integrity Investigation since Metrics Validation employs the raw data for the trunk blockage and collocation performance metrics.

**Table 1-8: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-6-1	The policies and procedures of data collection are defined and documented.	Satisfied	BA-MA utilizes screen-by-screen documentation and Enhancement Release Notes in the CBS/CNE system to document policies and procedures of data collection. BA-MA has had this system in place for at least one year.
PMR-1-6-2	Technical guides describing data collected are available.	Satisfied	BA-MA's screen-by-screen documentation and Enhancement Release Notes in the CBS/CNE system describe the data collected.
PMR-1-6-3	BA-MA is able to identify measurement control points.	Satisfied	BA-MA has guidelines and flow chart documentation which identify the measurement control points.
PMR-1-6-4	BA-MA is able to identify exact points of data collection.	Satisfied	BA-MA Applications Processing Group in the Wholesale Network Services (WNS) completes the data entry of applications in Boston and all other manual input of data. The Applications Processing Group is the sole source of data collection. Refer to interview summary "CBS_CNE-Summary 4-11-00.doc" for detail on BA-MA exact points of data collection.
PMR-1-6-5	BA-MA has adequate capacity to collect data.	Satisfied	BA-MA inputs data on a daily basis between 8AM and 6PM, Monday through Friday. PC system used to collect data have adequate capacity and data are backed up on a weekly basis. Refer to interview summary "CBS_CNE-Summary 4-11-00.doc" for detail on the capacity to collect data.
PMR-1-6-6	The values of selected filtered data, used to produce metrics, are consistent with the values of corresponding raw data.	Not Applicable	There is no differentiation between raw and filtered data for trunk blockage and collocation performance metrics. Data integrity was not performed for this domain.

### 3.1.1.7 Operator Services

KPMG Consulting requested a sample of raw data from the FMS and compared the raw data values to the filtered data.

**Table 1-9: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-7-1	The policies and procedures of data collection are defined and documented.	Satisfied	The documented policies and procedures maintained by the Wholesale Call Center (“WCC”) are defined and describe the procedures of data collection. The FMS at the WCC in Massachusetts produces paper reports in 15-minute increments which BA-MA retains. Refer to the document entitled “MAMetricsSummaryV2.doc” for detail on the policies and procedures for data collection.
PMR-1-7-2	Technical guides describing data collected are available.	Satisfied	BA-MA maintains technical guides which describe in sufficient detail the data used for metrics calculations.
PMR-1-7-3	BA-MA is able to identify measurement control points.	Satisfied	BA-MA FMS system identifies the measurement control points. Refer to interview summary “General Review of Info 030900.doc” for more detail on measurement control points.
PMR-1-7-4	BA-MA is able to identify exact points of data collection.	Satisfied	BA-MA FMS system identifies the exact points of data collection. Physical copies of reports produced by FMS verify these points of collection.
PMR-1-7-5	BA-MA has adequate capacity to collect data.	Satisfied	BA-MA has adequate capacity to collect data on its FMS at the WCC. Filtered data is stored electronically on PC systems which are sufficient. BA-MA retains physical printed copies of raw data which are adequate but subject to capacity constraints. BA-MA identified a memory error during the month of January which caused the loss of some data. The memory error loss was subsequently estimated for the data that were lost during the month. Refer to documents “New England CCS CALL QUEUE 15 02/24/00” and “New England CCS CALL QUEUE 15 06/01/00” for detail on the memory error during the month of January.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-7-6	The values of selected filtered data, used to produce metrics, are consistent with the values of corresponding raw data.	Satisfied	KPMG Consulting obtained a sample of the raw data produced by the FMS. KPMG Consulting selected several values of raw data and verified that they were consistent with the values of the corresponding filtered data.

### 3.1.2 Metrics Validation

KPMG Consulting conducted “military-style” testing on BA-MA performance metrics to evaluate the accuracy and completeness of BA’s calculations of metrics for December 1999, January 2000 and February 2000. KPMG Consulting compared its metrics values with those listed on the BA-MA C2C Reports for the test period. KPMG Consulting considered a metric to be replicated only if both the metric value and number of observations matched that on the BA-MA C2C Reports.

KPMG Consulting replicated 94% of the developed metrics provided in the BA-MA C2C Reports. Table 1-10 summarizes the number of metrics under development, the number of metrics replicated, and the number of metrics not replicated in comparison with the total number of metrics for the month. The KPMG Consulting replication sheets entitled “C2C0200 MA Replication.xls,” “C2C0100 MA Replication.xls” and “C2C0200 MA Replication.xls” include a comprehensive list of all BA-MA performance metrics results and KPMG Consulting calculations for all metrics in the C2C Reports.

**Table 1-10: PMR1 Metrics Validation Summary Results**

	Dec-99	Jan-00	Feb-00
Total metrics under development	109	81	81
Total metrics replicated	541	635	646
Total metrics not replicated	73	29	18
Total metrics in Massachusetts C2C Report	723	745	745

Some of the published numbers in the December, January and February C2C Reports were incorrect as compared to KPMG Consulting calculations, and could not be replicated even after basing the calculations on BA-MA’s data and algorithm descriptions. Discrepancies appear in both the metrics values and the counts (i.e., the number of values used in each calculation). The discrepancies are the result of one or more of the following: 1. BA-MA’s description of the

algorithm was incomplete or incorrect; 2. BA-MA's calculation was incorrect; or 3. BA-MA did not provide the correct data.

In some instances, BA-MA was unable to reproduce its own calculations because the data had not been saved or the code had changed. This indicates BA-MA does not always have a satisfactory change control process for metrics reporting in place. BA-MA has begun to put such processes in place.

Temporal trends in the number of metrics replicated were largely due to the improvements by BA-MA in their documentation of algorithms and calculation procedures.

### 3.1.2.1 Pre-Ordering

KPMG Consulting and BA-MA values agree for December through February, except for various Response Time OSS Ordering Interface (PO-1) and OSS Interface Availability (PO-2) metrics. Table 1-11 below lists the KPMG Consulting and BA-MA metric values and the differences between them. Note that shaded boxes indicate KPMG Consulting has replicated the metric for that month.

**Table 1-11: PMR1 KPMG Consulting Figures versus BA-MA C2C Figures<sup>116</sup>**

		December 1999			January 2000			February 2000		
Metric Number	Value	BA-MA Value	KPMG Value	Diff.	BA-MA Value	KPMG Value	Diff.	BA-MA Value	KPMG Value	Diff.
PO-1-01 – EDI (CLEC)	Average	6.08	7.65	-1.56						
	Count	Not listed on C2C								
PO-1-02 – EDI (Bell Atlantic)	Average				0.25	0.23	0.02			
	Count				Not listed on C2C					
PO-1-02 – EDI (Bell Atlantic)	Average	4.04	4.69	-0.66						
	Count	Not listed on C2C								
PO-1-03 – EDI (Bell Atlantic)	Average				2.56	4.08	-1.52			
	Count				Not listed on C2C					
PO-1-03 – EDI (CLEC)	Average	7.43	8.51	-1.08						
	Count	Not listed on C2C								
PO-1-04 – EDI (CLEC)	Average	4.46	5.34	-0.88						
	Count	Not listed on C2C								
PO-1-05 – EDI (Bell Atlantic)	Average	4.47	4.44	0.03	3.35	4.90	-1.55			
	Count	Not listed on C2C			Not listed on C2C					
PO-1-05 – EDI (CLEC)	Average	8.23	8.51	-0.28	5.41	0.00	5.41			
	Count	Not listed on C2C			Not listed on C2C					

<sup>116</sup> Total may not sum due to rounding.

		December 1999			January 2000			February 2000		
Metric Number	Value	BA-MA Value	KPMG Value	Diff.	BA-MA Value	KPMG Value	Diff.	BA-MA Value	KPMG Value	Diff.
PO-1-07 – EDI (Bell Atlantic)	Average	0.08	4.16	-4.08						
	Count	Not listed on C2C								
PO-1-07 – EDI (CLEC)	Average	3.54	5.57	-2.04	2.12	5.68	-3.55			
	Count	Not listed on C2C			Not listed on C2C					
		December 1999			January 2000			February 2000		
Metric Number	Value	BA-MA Value	KPMG Value	Diff.	BA-MA Value	KPMG Value	Diff.	BA-MA Value	KPMG Value	Diff.
PO-1-08 – EDI (CLEC)	Percent				0.56	0.00	0.56	0.11	0.00	0.11
	Count	Not listed on C2C			Not listed on C2C			Not listed on C2C		
PO-1-09 – EDI (CLEC)	Average	7.58	7.65	-0.07						
	Count	Not listed on C2C								
PO-2-01 – EDI	Percent	99.96	NA <sup>117</sup>	NA	99.53	99.90	-0.37	99.10	99.45	-0.35
	Count	172800	NA	NA	178560	178560	0	167040	167040	0
PO-2-01 – Maint.	Percent	99.23	NA	NA	99.88	99.90	-0.02	99.65	99.76	-0.11
	Count	172800	NA	NA	178560	178560	0	167040	167040	0
PO-2-01 Pre-Order/Order	Percent	99.23	NA	NA	99.88	99.90	-0.02	99.65	99.76	-0.11
	Count	172800	NA	NA	178560	178560	0	167040	167040	0
PO-2-02 – EDI	Percent	99.97	NA	NA	99.52	99.84	-0.32	99.43	99.50	-0.07
	Count	112320	NA	NA	108000	108000	0	103680	103680	0
PO-2-02 – Maint.	Percent	98.97	NA	NA	99.84	99.88	-0.03	99.54	99.61	-0.07
	Count	112320	NA	NA	108000	108000	0	103680	103680	0
PO-2-02 Pre-Order/Order	Percent	98.97	NA	NA	99.84	99.88	-0.03	99.54	99.61	-0.07
	Count	112320	NA	NA	108000	108000	0	103680	103680	0
PO-2-03 – EDI	Percent	99.94	NA	NA	99.56	100.00	-0.44	98.57	99.36	-0.79
	Count	60480	NA	NA	70560	108000	0	63360	63360	0
PO-2-03 – Maint.	Percent	99.73	NA	NA	99.94	99.95	-0.01	99.84	100.00	-0.16
	Count	60480	NA	NA	70560	108000	0	63360	63360	0
PO-2-03 Pre-Order/Order	Percent	99.73	NA	NA	99.94	99.95	-0.01	99.84	100.00	-0.16
	Count	60480	NA	NA	70560	108000	0	63360	63360	0

<sup>117</sup> KPMG Consulting did not have the necessary data to fully replicate the PO-2 metrics in December.

### 3.1.2.1.1 Response Time OSS Ordering Interface (PO-1)

The PO-1 performance metrics measure the average response time for retail and resale customers. BA-MA uses two EnView robots to monitor the performance of the OSS Pre-Ordering interface and simulate Pre-Ordering transactions. The EcXpert interface then captures and reports the response times.

KPMG Consulting and BA-MA metrics values agree for February 2000, except for metrics PO-1-04, PO-1-05, and PO-1-07 in December 1999 and January 2000. Refer to Table 1-11 for detail on the metrics value differences. KPMG Consulting encountered validation difficulties when reviewing the BA-MA algorithms. BA-MA provided detailed PERL and Visual Basic programming code in place of metrics algorithms. Monthly coding changes were often imbedded in the programming codes and not documented on a level understood by a non-technical audience. Additionally, BA-MA did not provide timely and complete notification of changes.

For instance, in February 2000, BA-MA altered the script names used to identify particular retail transaction types (Customer Service Request, Due Date Availability, etc.) in the PERL programming code. Table 1-12 gives an extensive account of the differences between the algorithms used in December 1999 and February 2000.

**Table 1-12: PMR1 December vs. February algorithms: PO-1 Retail Metrics**

Metric Number	Metric Description	BA-MA December Script Name	BA-MA February Script Name
PO-1-01 Retail	Customer Service Record - EDI	“ICRIS_SYR”	“BOSS_NE”
		“CSR_NY”	“CSR”
PO-1-02 Retail	Due Date Availability - EDI	“SOP_NY”	“SOP_NE”
		“WLU_NY”	“WLU_MA”
PO-1-03 Retail	Address Validation - EDI	“LWG_XA3RAG20”	“LWG_XA3RAJ20”
		“ADDRVRFY_BX”	“ADDRVRFY_MA”
		“PREMIS_NY”	“LWG_XA3RAJ20”
		“REQPREM”	“ADDRVRFY_MA”
PO-1-04 Retail	Product & Service Availability - EDI	“ICRIS_SYR”	“BOSS_NE”
		“BCO_NY”	“BCO”
PO-1-05 Retail	Telephone Number Availability & Reservation - EDI	“PREMIS_NY”	“LWG_XA3RAJ20”
		“REQTNS”	“TN_SELECT_MA”
		“LWG_XA3RAG20”	“LWG_XA3RAJ20”
		“TN_SELECT_BX”	“TN_SELECT_MA”

Metric Number	Metric Description	BA-MA December Script Name	BA-MA February Script Name
PO-1-07 Retail	Rejected Query - EDI	“REJCSR_NY”	“BOSS_NE” “REJCSR_MA”
PO-1-09 Retail	Parsed CSR – EDI	“ICRIS_SYR”	“BOSS_NE”
		“CSR_NY”	“CSR”

BA-MA also altered two coding descriptions in the resale programming code. Table 1-13 illustrates the differences between the resale algorithms used in December 1999 and February 2000.

**Table 1-13: PMR1 December vs. February algorithms: PO-1 Resale Metrics**

Metric Number	Metric Description	BA-MA December	BA-MA February
PO-1-07 Resale	Rejected Query – EDI	Not Available	Use NY transactions with SEM and CSR
PO-1-08 Resale	% Timeouts – EDI	Response time >= 60 for non-TNS OR Response time >= 330 for TNS	Response time >= 60

#### 3.1.2.1.2 OSS Interface Availability (PO-2)

KPMG Consulting and BA-MA values did not agree for most of the PO-2 metrics. Refer to Table 1-11 for detail on the metrics value differences. KPMG Consulting encountered validation difficulties when reviewing the BA-MA algorithms. The algorithms failed to document the calculations of the PO-2 metrics according to the NYC2C Guidelines. The guidelines dictate that BA-MA calculate OSS Interface Availability metrics based on EnView log files and CLEC call log files. The BA-MA algorithms document only the metrics calculation of highly aggregated and filtered Excel data. BA-MA did not produce algorithms that illustrate the metrics calculation from the EnView log files. During the retest of BA-MA’s Pre-Ordering metrics calculations, BA-MA provided detailed algorithms and revised their formulas for calculating the PO-2 metrics to comply with the NYC2C Guidelines.

KPMG Consulting verified and validated the BA-MA formulas used to calculate the total number of minutes available to CLECs, specifically the denominators for the Interface Availability metrics.

## 3.1.2.1.3 Pre-Ordering (PMR1) Evaluation Criteria and Results

**Table 1-14: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-1-7	BA-MA's computer code and algorithms are consistent with the metrics outlined in the NYC2C.	Satisfied	<p>The algorithms used by BA-MA to calculate the OSS Interface Availability metrics (PO-2) do not comply with the NYC2C Guidelines. An example of BA-MA's incorrect calculation of the PO-2 family of metrics is the PO-2-01 metrics. The NYC2C guidelines require that the numerator of the metrics is "(Number of Hours in Month) – (Number of Hours Interface is not available during Month)". The denominator is the "Number of Hours in Month." BA-MA's algorithm used as the denominator the number of hours in the month multiplied by the "number of boxes". The number of boxes is not incorporated in the NYC2C guideline's calculation of the metric.</p> <p>Initially, BA-MA failed to calculate the Contact Center Availability metrics (PO-3-02) according to the formula documented in the February 28, 2000 NYC2C Guidelines. The Contact Center Availability metric, "percent of calls answered within thirty seconds," is a percentage adjusted for the number of busy and abandoned calls. BA-MA's calculation of the metric did not include abandoned or busy calls. BA-MA instituted a correction to include abandoned and busy calls. KPMG Consulting verified that these revised metrics were being calculated correctly for the months December 1999 through February 2000. Additionally, BA-MA revised its reported results in the July 1999 through May 2000 C2C Reports.</p> <p>During the retest of BA-MA's Pre-Ordering metrics calculations, BA-MA revised their formulas for calculating the PO-2 metrics. KPMG Consulting verified for the months of March and July 2000 that BA-MA's revised formulas calculate the average OSS Interface availability for the number of boxes used to provide service. KPMG Consulting's formulas agree with BA-MA's formulas for the metric values.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-1-8	BA-MA reported and KPMG Consulting calculated metric values agree.	Satisfied	<p>BA-MA and KPMG Consulting metric values did not agree for various metrics in the PO-1 and PO-2 families. There were 9 discrepancies in December 1999, 15 discrepancies in January 2000, and 10 discrepancies in February 2000. Refer to Table 1-11 for details on the differences between KPMG Consulting and BA-MA metric values.</p> <p>KPMG Consulting believes more PO-1 metric values would have been replicated had it not been for change management issues addressed in test cross reference PMR-1-1-12. For instance, BA-MA provided PERL programming code in place of detailed algorithms and did not identify monthly coding changes for the PO-1 metrics.</p> <p>During the retest of the metrics change management process, BA-MA provided generally understood algorithms (see “JUL00 MA Pre Order Metrics Algorithms.xls”). KPMG Consulting successfully replicated all 17 PO-1 metrics using March and July 2000 data. KPMG Consulting also was able to reconcile the differences in the PO-2 metrics for March and July after BA-MA modified their algorithms (see “revised march availability.xls,” “interface availability 2000.xls”).</p> <p>Initially, Contact Center Availability metric (PO-3) values were incorrect. BA-MA subsequently revised their method of calculating the metrics. KPMG Consulting verified that the metrics reported during the months December 1999 through February 2000 were calculated correctly.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-1-9	BA-MA has included all metrics in the C2C Reports that it has agreed to provide.	Satisfied	<p>PO-1-05 Telephone Number Availability &amp; Reservation</p> <p>PO-1-06 Facility Availability (Loop Qualification)</p> <p>PO-1-07 Rejected Query</p> <p>PO-1-08 % Timeouts</p> <p>PO-1-09 Parsed CSR</p> <p><u>EDI Interface</u></p> <p>PO-1-06 Facility Availability (Loop Qualification)</p> <p>Reason: With the Corba system being newly deployed in January 2000, there was insufficient time to complete the programming necessary to capture and report the data. The EDI metric is awaiting field programming.</p> <p>PO-6-01 Software Validation</p> <p>Reason: The data collection application is being built, Help desk staff are being trained.</p> <p>PO-7 Software Problem Resolution Timeliness</p> <p>PO-7-01 % Software Problem Resolution Timeliness</p> <p>PO-7-02 Delay Hours – Software Resolution – Change – Transactions Failed, No Workaround</p> <p>PO-7-03 Delay Hours – Software Resolution – Change – Transactions Failed, With Workaround</p> <p>PO-7-04 Delay Hours – Failed/Rejected Test Deck Transactions – Transactions Failed, No Workaround</p> <p>Reason: The data collection application is being built, Help desk staff are being trained.</p>
PMR-1-1-10	BA-MA has adequate and complete NYC2C Guidelines.	Satisfied	BA-MA operated from a complete set of guidelines, comprising the November 15, 1999 and February 28, 2000 NYC2C Guidelines.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-1-11	BA-MA's tools used in metrics calculations are accurate and able to control housed data.	Satisfied	BA-MA met the criteria identified for the use of these tools. BA-MA uses PERL programming code to process the EnView and EcXpert data and Visual Basic to automatically generate metrics reports.
PMR-1-1-12	BA-MA change management procedures are documented.	Not Satisfied	<p>BA-MA has no formal change management procedures in place for Pre-Ordering PO-1 metrics calculations. Though BA-MA has documented coding changes in its PERL programming code, BA-MA does not document coding changes in any high-level algorithm or in the BA-MA global tracking register. Upon KPMG Consulting's request, BA-MA provided PO-1 metrics algorithms on June 1, 2000. However, these documents did not sufficiently address changes in the algorithms over time. For more detail on the documents provided by BA-MA on June 1, 2000, refer to the documents titled "newenview_pl.doc," "NewEnView_bas.doc," "newecx_0001_pl.doc," "NewECX_bas.doc," and "DCASspreadsheet."</p> <p>KPMG Consulting did not recognize adequate change control documentation between December 1999 and February 2000 when BA-MA implemented significant changes in the calculation of PO-1 metrics. In one case, BA-MA used New York EnView transactions to calculate Customer Service Record (CSR) timeliness in December 1999. In February 2000, BA-MA began using Massachusetts EnView transactions. BA-MA did not document these changes in any high-level algorithm or in BA-MA's "Global Change Tracking Register." Refer to Tables 1-12 and 1-13 for a detailed list of all algorithm changes implemented between December 1999 and February 2000.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			In response to KPMG Consulting's concern about BA-MA's change management documentation process, BA-MA has stated that, going forward, technicians will update changes in the Bell Atlantic global tracking register. In addition, BA-MA has stated that it has instituted formal training sessions to instruct technicians on documenting and tracking changes. During the change management retest, KPMG Consulting conducted an interview regarding BA-MA's change management process scheduled to be fully implemented in September 2000. It is KPMG Consulting's opinion that the planned change control process when completed, and if complied with, is a sufficient process for documenting algorithm changes. Since the initial implementation of BA-MA's change management process in June 2000, KPMG Consulting verified that BA-MA applied and properly documented one PO-1 coding change.

### 3.1.2.2 Ordering

KPMG Consulting and BA-MA values agree for December through February, except for isolated discrepancies in metrics OR-3-01 (Percent Rejects), OR-4-04 (Work Completion Notice – Average Response Time), and OR-5-02 (Percent Flowthrough – Simple). In several cases, KPMG Consulting counts differed from BA-MA counts by one or two orders. KPMG Consulting determined that the difference was not substantial and considered the metric to be replicated. In three cases, KPMG Consulting was not able to match BA-MA's calculations for reasons apparently related to complex service order processing.

## 3.1.2.2.1 Ordering (PMR1) Evaluation Criteria and Results

**Table 1-15: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-2-7	BA-MA's computer code and algorithms are consistent with the metrics outlined in the NYC2C Guidelines.	Satisfied	The BA-MA ordering algorithms entitled "MAORDERINGguidelines510.doc" and "ED_RDS_TK002C.doc" are consistent with metrics outlined in the NYC2C Guidelines. KPMG Consulting generated computer code on the basis on this algorithm, replicated the BA-MA values with the code, and determined that the BA-MA computer code must also be consistent with the NYC2C Guidelines.
PMR-1-2-8	BA-MA reported and KPMG Consulting calculated metric values agree.	Satisfied	BA-MA and KPMG Consulting metric values agree for all Ordering metrics except isolated discrepancies with the OR-3-01 UNE POTS/Specials metric, the OR-4-04 UNE-POTS Specials metric, and the OR-5-02 resale POTS/Specials metrics. These discrepancies were not material.
PMR-1-2-9	BA-MA has included all metrics in the C2C Reports that it has agreed to provide.	Satisfied	BA-MA reported all metrics except those listed below. The first group consisted of metrics which were not reported in the C2C reports at all; the second group comprised metrics flagged in the C2C reports as "under development." BA-MA has a program in place to develop the remaining metrics.  <u>Missing Metrics</u> OR-4-06 Avg Duration – Work Completion (SOP) to Bill Completion OR-4-07 % SOP to Bill Completion > 5 Business Days OR-4-08 % SOP to Bill Completion > 1 Business Day

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<u>Metrics Under Development</u> <u>Resale and UNE</u> <u>POTS/Special Services - Aggregate</u> OR-5-03 % Flowthrough Achieved <u>Special Services – Electronic</u> OR-1 Order Confirmation Timeliness OR-1-03 Avg ASRC Time <10 lines DS0 OR-1-03 Avg ASRC Time <10 lines DS1 OR-1-03 Avg ASRC Time <10 lines DS3 OR-1-04 %On Time ASRC<10 lines DS0 OR-1-04 %On Time ASRC<10 lines DS1 OR-1-04 %On Time ASRC<10 lines DS3 OR-1-05 Avg ASRC Time>=10 lines DS0 OR-1-05 Avg ASRC Time>=10 lines DS1 OR-1-05 Avg ASRC Time>=10 lines DS3 OR-1-06 %On Time ASRC>=10 lines DS0 OR-1-06 %On Time ASRC>=10 lines DS1 OR-1-06 %On Time ASRC>=10 lines DS3
PMR-1-2-10	BA-MA has adequate and complete NYC2C Guidelines.	Satisfied	BA-MA operated from a complete set of guidelines, comprising the November 15, 1999 and February 28, 2000 NYC2C Guidelines.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-2-11	BA-MA's tools used in metrics calculations are accurate and able to control housed data.	Satisfied	<p>All BA-MA Electronic Purchase Order Numbers (PONs) that are sent by the CLECs and received by Bell Atlantic are maintained in a transaction database in Direct Customer Access Services (DCAS) in the North and Request Manager (RM) in the South. Additionally all subsequent activities such as PON confirmations, queries and order completion notifications are maintained there. At the end of each day, these transactions are extracted from the databases based on the Processing date and transmitted to the Ordering Metrics Server.</p> <p>Initially, BA-MA was manually downloading the Service Order Accuracy metrics data into an Excel spreadsheet and then physically counting the orders that go into the metric. BA-MA made errors in counting orders and has since implemented a macro to automate the process and reduce error.</p>
PMR-1-2-12	BA-MA change management procedures are documented.	Satisfied	<p>BA-MA met the criteria identified for Ordering metrics. BA-MA provided monthly coding updates, and changes were recorded in a global tracking register.</p> <p>BA-MA revised the Ordering trunk data and algorithms on several occasions throughout December, January and February. BA-MA identified and documented changes in the algorithm entitled, "ED_RDS_TK002C.doc."</p>

### 3.1.2.3 Provisioning

All KPMG Consulting and BA-MA values agree for January and February, except for PR-2-02 (UNE Specials), and PR-6-02 (UNE POTS). KPMG Consulting encountered a number of discrepancies in validating metrics for December 1999. BA-MA altered the Provisioning computer code and algorithms between December and January and did not identify the changes in the change control document or tracking register. In several cases, KPMG Consulting counts differed from BA-MA counts by one or two orders. KPMG Consulting determined that the difference was not significant and considered the metric to be replicated.

## 3.1.2.3.1 Provisioning (PMR1) Evaluation Criteria and Results

**Table 1-16: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-3-7	BA-MA's computer code and algorithms are consistent with the metrics outlined in the NYC2C.	Satisfied	<p>The BA-MA Provisioning and Provisioning trunk algorithms are consistent with metrics outlined in the NYC2C Guidelines. KPMG Consulting generated computer code on the basis of these algorithms, replicated the BA-MA values with the code, and determined that the BA-MA computer code must also be consistent with the NYC2C Guidelines.</p> <p>BA-MA measures the Installation Quality (PR-6) metrics with numerator and denominator values based on time periods that are not aligned. There is an inconsistency in the NYC2C Guidelines between the way the metrics are defined and the way the metrics are calculated. The definition implies that the metrics should review orders in a month and look out 30 days after the order was completed for a trouble report on the line. BA-MA states that it has issued a request to the Carrier Working Group in New York to clarify the guidelines such that they are consistent with the way the metrics are being calculated. BA-MA also states that the NYC2C Guidelines have since been revised. This discrepancy does not invalidate the successful conclusion of the test in this domain taken as a whole.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-3-8	BA-MA reported and KPMG Consulting calculated metrics values agree.	Satisfied	BA-MA and KPMG Consulting metric values agree for most of the Provisioning metrics in the C2C Reports. There were 37 discrepancies in December 1999, 1 discrepancy in January 2000, and 2 discrepancies in February 2000. These isolated discrepancies, representing less than 5% of the reported metrics during this period, are not material. BA-MA and KPMG Consulting standard deviations agree for all but four of the metrics. Again, the discrepancies between BA-MA and KPMG Consulting values are not material. KPMG Consulting believes that all metrics values would have been replicated had it not been for change management issues addressed in test cross reference PMR-1-3-12. For instance, BA-MA altered the Provisioning computer code and algorithms between months and did not identify the changes in the change control document or tracking register.
PMR-1-3-9	BA-MA has included all metrics in the C2C Reports that it has agreed to provide.	Satisfied	BA-MA reported all metrics except the following metrics, accounting for just 3% of the total. The first group consisted of metrics which were not disaggregated in the C2C reports as required by the Guidelines; the second group comprised metrics flagged in the C2C reports as “under development.” BA-MA has a program in place to develop the remaining metrics and include the appropriate level of disaggregation.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p><u>Metrics Not Disaggregated as between 2 Wire Digital Svcs and 2 Wire xDSL Svcs, UNE orders not separated between Loop and Platform</u></p> <p>PR-5 Facility Missed Orders</p> <p>PR-5-01 % Missed Appointments – Bell Atlantic Facilities</p> <p>PR-5-02 % Orders Held for Facilities &gt; 15 Days</p> <p>PR-5-03 % Orders held for Facilities &gt; 60 Days</p> <p>The impact of this deficiency is not significant because the total number of transactions in the aggregate is not material.</p> <p><u>Metrics Under Development</u></p> <p><u>Resale POTS/Complex</u></p> <p>PR-6-01 % Installation Troubles Reported within 30 Days</p> <p><u>UNE Special Services - EELs</u></p> <p>PR-1-09 Avg Interval Offered – Backbone and Loop</p> <p>PR-2-09 Avg Interval Completed – Backbone and Loop</p> <p>PR-4-01 % Missed Appointment – Bell Atlantic – Total</p> <p>PR-4-02 Avg Delay Days</p> <p>PR-4-03 % Missed Appointment – Customer</p> <p>PR-7-01 Orders with Jeopardy Status</p> <p>BA-MA has experienced difficulty filtering out the Inter Office Facility data to generate separate totals for EELs.</p> <p>BA-MA is awaiting the development of a permanent solution by Telcordia.</p>
PMR-1-3-10	BA-MA has adequate and complete NYC2C Guidelines.	Satisfied	BA-MA operated from a complete set of guidelines, comprising the November 15, 1999 and February 28, 2000 NYC2C Guidelines.
PMR-1-3-11	BA-MA's tools used in metrics calculations are accurate and able to control housed data.	Satisfied	BA-MA employs the "Forest & Trees" software to calculate Provisioning metrics. This tool is accurate for the purpose of metrics calculation.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-3-12	BA-MA change management procedures are documented.	Not Satisfied	<p>BA-MA altered the Provisioning computer code and algorithms on numerous occasions from December 1999 through February 2000. BA-MA failed to issue clear and complete change control requests in its global tracking register and failed to present proper documentation of changes to KPMG Consulting.</p> <p>For instance, the BA-MA change control document CC200018 directs the user to "change the indicators table for hotcuts to FDT IS NOT NULL and cold cuts to FDT IS NULL." This document indicates that the change was implemented on February 10, 2000, whereas BA-MA actually applied this change to metrics during the month of January 2000.</p> <p>In the same change control document, CC200018, BA-MA directs the user to "record the least of these three: Total Company Days, or Total Delay Days, or the difference between the 1<sup>st</sup> Company MAC and the Completion Date." This description fails to identify the metrics that will be impacted by the change.</p> <p>BA-MA documented changes to the Provisioning metrics calculations in its Forest and Trees programming code. However, this technical code is not satisfactory as a clear and understandable process for change management.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<p>KPMG Consulting replicated all Provisioning metrics for February 2000 on May 24. There were 33 metrics not matching in January 2000 using the February 2000 code. KPMG Consulting was able to replicate the metrics after consulting with the BA-MA Provisioning lead. KPMG Consulting then applied the January code to the December data and found another 40 metrics not matching.</p> <p>During the change management retest, KPMG Consulting conducted an interview regarding BA-MA's change management process scheduled to be fully implemented in September 2000. It is KPMG Consulting's opinion that the planned change control process when completed, and if complied with, is a sufficient process for documenting algorithm changes.</p> <p>BA-MA revised the Provisioning trunk data and algorithms on several occasions throughout December, January and February. BA-MA identified and documented changes in the algorithm entitled, "ED_RDS_TK002C.doc."</p>

#### 3.1.2.4 Maintenance and Repair

All KPMG Consulting and BA-MA values agree for December through February, except for isolated discrepancies with metrics MR-2-02, MR-2-05 and MR-3-03, and the Trouble Reporting (MR-1) metric family.

## 3.1.2.4.1 Maintenance and Repair (PMR1) Evaluation Criteria and Results

**Table 1-17: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-4-7	BA-MA's computer code and algorithms are consistent with the metrics outlined in the NYC2C.	Satisfied	BA-MA provided an M&R POTS algorithm entitled, "Mansrcd.txt," an M&R Specials algorithm entitled, "Fccdefam_C2C.xls," and M&R Trouble Reporting algorithms entitled, "MR-1 Collection and processing.doc" and "RETAS and Metrics.doc." Each algorithm is consistent with the corresponding metrics outlined in the NYC2C Guidelines. KPMG Consulting generated computer code on the basis on these algorithms, replicated the BA-MA values with the code, and determined that the BA-MA computer code must also be consistent with the NYC2C Guidelines.
PMR-1-4-8	BA-MA reported and KPMG Consulting calculated metrics values agree.	Satisfied	<p>The KPMG Consulting and BA-MA Maintenance and Repair metric values agree for most metrics from December 1999 through February 2000. There were 12 discrepancies in December 1999, 8 discrepancies in January 2000, and 3 discrepancies in February 2000. These isolated discrepancies, representing 6% of the reported metrics during this period, are not material.</p> <p>KPMG Consulting validated the February Caseworker metric values but was not able to validate December or January metrics values as data for the entire months had not been archived. For example, BA-MA pulled the January raw data after the first week of data had already rolled off the system. Consequently, BA-MA could not provide data for the entire month, and KPMG Consulting could not replicate the results on the January C2C Report. The BA-MA and KPMG Consulting metric values differ slightly for only six metrics.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-4-9	BA-MA has included all metrics in the C2C Reports that it has agreed to provide.	Satisfied	<p>BA-MA reported all metrics except those listed below. The first group consisted of metrics which were not disaggregated in the C2C reports as required by the Guidelines or were not reported at all; the second group comprised metrics flagged in the C2C reports as “under development.” Interim workarounds are scheduled pending determination by Telcordia of permanent software solutions. The programs in place to develop the remaining metrics had reduced the proportion of undeveloped from 17% in December 1999 to 6% in April 2000.</p> <p><u>Metrics not disaggregated between Loop and Platform</u></p> <p><u>UNE</u></p> <p>MR-2 Trouble Report Rate</p> <p>MR-2-03 Network Trouble Rate – Central Office</p> <p>MR-2-04 % Subsequent Reports – Network Trouble</p> <p>MR-2-05 % CPE/TOK/FOK Trouble Report</p> <p>MR-4 Trouble Duration Intervals</p> <p>MR-4-01 Mean Time to Repair – Total</p> <p>MR-4-03 Mean Time to Repair – Central Office Trouble</p> <p>MR-4-04 Cleared (all troubles) within 24 Hours</p> <p>MR-4-07 % Out of Service.12 Hours</p> <p>MR-4-08 % Out of Service&gt;24 Hours</p> <p>MR-5 Repeat Trouble Reports</p> <p>MR-5-01 % Repeat Reports within 30 Days</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
			<u>Metrics not reported</u> <u>UNE Complex</u> MR-2-04 % Subsequent Reports – Network Trouble MR-3-03 % CPE/TOK/FOK – Missed Appointment MR-3-04 % Missed Repair Appointment – No Double Dispatch MR-3-05 % Missed Repair Appointment – Double Dispatch <u>Resale</u> MR-3-04 % Missed Repair Appointment – No Double Dispatch MR-3-05 % Missed Repair Appointment – Double Dispatch <u>Metrics Under Development</u> <u>POTS</u> MR-3-03 % CPE/TOK/FOK – Missed Repair Appointment – Platform MR-4-02 Mean Time to Repair – Loop Trouble – Platform <u>POTS Complex</u> MR-2-02 Network Trouble Report Rate – Loop MR-2-03 Network Trouble Report Rate – Central Office MR-2-05 % CPE/TOK/FOK Trouble Report Rate MR-3-01 % Missed Repair Appointment – Loop MR-3-02 % Missed Repair Appointment – Central Office MR-4-01 Mean Time To Repair – Total MR-4-02 Mean Time To Repair – Loop Trouble MR-4-03 Mean Time To Repair – Central Office Trouble MR-4-08 % Out of Service>24 Hours MR-5-01 % Repeat Reports within 30 Days

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-4-10	BA-MA has adequate and complete NYC2C Guidelines.	Satisfied	BA-MA operated from a complete set of guidelines, comprising the November 15, 1999 and February 28, 2000 NYC2C Guidelines.
PMR-1-4-11	BA-MA's tools used in metrics calculations are accurate and able to control housed data.	Satisfied	BA-MA employs the NORD database system to accurately calculate M&R metrics. The Trouble Reporting (OSS) Caseworker tools are mostly accurate. Data for metrics MR-1-02 and MR-1-05 had not been archived during the test period and KPMG Consulting could not replicate the metric values. The lack of data for these isolated metrics does not invalidate the successful conclusion of the test in this domain taken as a whole.
PMR-1-4-12	BA-MA change management procedures are documented.	Satisfied	BA-MA has met the criteria for sufficiently documenting its change management procedures. BA-MA documents and provides monthly detail on any changes to the prior month's code in the "NORD Programming Request documents."

### 3.1.2.5 Billing

KPMG Consulting and BA-MA metrics calculations agree for all Billing metrics reported in the months December 1999 through February 2000.

#### 3.1.2.5.1 Billing (PMR1) Evaluation Criteria and Results

**Table 1-18: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-5-7	BA-MA's computer code and algorithms are consistent with the metrics outlined in the NYC2C.	Satisfied	BA-MA's computer code and algorithms are consistent with metrics calculations outlined in the NYC2C. BA-MA calculates the Timeliness of Carrier Bill and Billing Accuracy metrics manually without employing computer code. However, the documented algorithms for manually calculating these metrics are consistent with the metrics outlined in the NYC2C Guidelines.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-5-8	BA-MA reported and KPMG Consulting calculated metric values agree.	Satisfied	All KPMG Consulting and BA-MA calculated values agreed except for the December metric BI-2-01. BA-MA reported the annual value instead of the correct December value for this metric. KPMG Consulting has confirmed this incorrect metric value with BA-MA, and BA-MA subsequently revised its reported results to the KPMG Consulting value.
PMR-1-5-9	BA-MA has included all metrics in the C2C Reports that it has agreed to provide.	Satisfied	BA-MA reported BI-3-01 throughout the reporting period but could not report BI-3-02 because of a lack of clarity in the guidelines themselves as to exactly what data should be captured in both the numerator and the denominator of the metric. Following extensive review, that situation was resolved, and the metric has been reported since April, 2000.  BI-3-01 % Billing Adjustments – Dollars Adjusted  BI-3-02 % Billing Adjustments – Number of Adjustments  BA-MA reported BI-3-01 but not BI-3-02 until April 2000 because of a lack of clarity about the definition of “number of adjustments.”
PMR-1-5-10	BA-MA has adequate and complete NYC2C Guidelines.	Satisfied	BA-MA operated from a complete set of guidelines, comprising the New York November 15, 1999 and February 28, 2000 C2C Guidelines.
PMR-1-5-11	BA-MA’s tools used in metrics calculations are accurate and able to control housed data.	Satisfied	BA-MA calculates the Timeliness of Daily Usage Feed metric using a mainframe computer system that is accurate and able to control housed data. The calculation of the Billing Accuracy and Timeliness of Carrier Bill metric is a manual process subject to human error. BA-MA houses Billing Accuracy and Timeliness of Carrier Bill data in electronic form allowing for adequate control. Refer to the interview summary “CRIS-Summary.doc” and the document “Filedes.doc” for detail on BA-MA’s tools for data collection.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-5-12	BA-MA change management procedures are documented.	Satisfied	BA-MA algorithms for calculating Billing metrics have been consistent month-to-month. Change management procedures are documented through the Change Control Tracking Registrar.

### 3.1.2.6 Network Performance

KPMG Consulting and BA-MA values agreed for December through February, except for metric NP-2-05, for which the January values did not agree. For this metric, BA-MA erroneously reported three physical collocations as on time completions. BA-MA later corrected the error, and BA-MA and KPMG Consulting values agree.

#### 3.1.2.6.1 Network Performance (PMR1) Evaluation Criteria and Results

**Table 1-19: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-6-7	BA-MA's computer code and algorithms are consistent with the metrics outlined in the NYC2C.	Satisfied	BA-MA's process for calculating the Trunk Blockage metric values is manual and no computer code exists. BA-MA uses an automated macro to calculate Collocation Completions metrics. The algorithms documented by BA-MA were consistent with the metrics outlined in the NYC2C.
PMR-1-6-8	BA-MA reported and KPMG Consulting calculated metric values agree.	Satisfied	BA-MA reported and KPMG Consulting calculated metrics agreed except for % On Time - Physical Collocation (NP-2-05) which did not agree for January. KPMG Consulting has formally alerted BA-MA to this discrepancy. BA-MA corrected the documentation that was pertinent to these metrics which was verified by KPMG Consulting.
PMR-1-6-9	BA-MA has included all metrics in the C2C Reports that it has agreed to provide.	Satisfied	No metrics were unreported or under development.
PMR-1-6-10	BA-MA has adequate and complete NYC2C Guidelines.	Satisfied	BA-MA operated from a complete set of guidelines, comprising the New York November 15, 1999 and February 28, 2000 C2C Guidelines.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-6-11	BA-MA's tools used in metrics calculations are accurate and able to control housed data.	Satisfied	BA-MA's process for calculating metrics is accurate but largely a manual process for the Collocation Completion metrics subject to human error. KPMG Consulting identified three physical collocation completions in January that were erroneously classified as on time completions corrupting the corresponding calculated metric value. BA-MA corrected documentation regarding these completions which was verified by KPMG Consulting. The impact of the misclassifications was not so large as to materially effect the reported operating performance.
PMR-1-6-12	BA-MA change management procedures are documented.	Satisfied	BA-MA's algorithms for calculating network performance metrics were consistent month-to-month. The algorithms documented by BA-MA were consistent with the metrics outlined in the NYC2C.

### 3.1.2.7 Operator Services

All KPMG Consulting and BA-MA values agree for all Operator Services and Directory Assistance metrics from December 1999 through February 2000.

#### 3.1.2.7.1 Operator Services (PMR1) Evaluation Criteria and Results

**Table 1-20: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-7-7	BA-MA's computer code and algorithms are consistent with the metrics outlined in the NYC2C.	Satisfied	BA-MA process for calculating the metrics is mostly manual and does not require computer code. The documented manual algorithm is consistent with the metrics outlined in the NYC2C.
PMR-1-7-8	BA-MA reported and KPMG Consulting calculated metric values agree.	Satisfied	BA-MA reported metrics and KPMG Consulting calculated metric values agreed for the months of December, January, and February.
PMR-1-7-9	BA-MA has included all metrics in the C2C Reports that it has agreed to provide.	Satisfied	No metrics were unreported or under development.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-7-10	BA-MA has adequate and complete NYC2C Guidelines.	Satisfied	BA-MA operated from a complete set of guidelines, comprising the New York November 15, 1999 and February 28, 2000 C2C Guidelines.
PMR-1-7-11	BA-MA's tools used in metrics calculations are accurate and able to control housed data.	Satisfied	BA-MA's Operator Services data is housed in electronic form for fifteen minutes before it is manually tallied to calculate the metric. KPMG Consulting has encountered some rounding errors due to the manual process for calculating the metric but these were not of sufficient magnitude to invalidate the successful conclusion of the test. During the month of January, computer memory failure at BA-MA caused a substantial loss of the monthly data.
PMR-1-7-12	BA-MA change management procedures are documented.	Satisfied	BA-MA algorithms for calculating Operator Services metrics were consistent month-to-month. Change management procedures were documented through the Change Control Tracking Registrar.

### 3.1.3 Transaction Test Report Generation

Using standard statistical methods, KPMG Consulting investigated BA-MA's performance for the transaction tests based on the NYC2C performance standards. Analyses compared transaction test metrics to benchmark standards or retail standards when appropriate.

#### 3.1.3.1 Pre-Ordering

KPMG Consulting calculated the Pre-Ordering retail metrics for the testing period based on EnView log files sent by BA-MA. PMR1 and the Pre-Ordering Transaction team will use these retail metrics values as a benchmark for comparison with the metrics values generated by the KPMG Consulting transactions. Tables 1-21 lists the C2C retail metrics values, where applicable, for pre-orders submitted from May 15, 2000 through June 20, 2000.

**Table 1-21: PMR1 Pre-Ordering Retail Metrics Values**

Metric #	Metric Description	Standard	Retail Value	Retail Count
<b><i>PO-1 - Response Time OSS Ordering Interface</i></b>				
PO-1-01	Customer Service Record – EDI	<i>Parity plus &lt; 4 Seconds</i>	NA	0
PO-1-02	Due Date Availability – EDI	<i>Parity plus &lt; 4 Seconds</i>	0.20	3643
PO-1-03	Address Validation – EDI	<i>Parity plus &lt; 4 Seconds</i>	4.25	3692
PO-1-04	Product & Service Availability – EDI	<i>Parity plus &lt; 4 Seconds</i>	NA	0
PO-1-05	Telephone Number Availability & Reservation – EDI	<i>Parity plus &lt; 4 Seconds</i>	5.13	3679
PO-1-06	Facility Availability (Loop Qualification) – EDI	<i>Parity plus &lt; 4 Seconds</i>	NA	0
PO-1-07	Rejected Query – EDI	<i>Parity plus &lt; 4 Seconds</i>	0.06	3444
PO-1-08	% Timeouts – EDI	<i>Not &gt; .33%</i>	NA	0
PO-1-09	Parsed CSR – EDI	<i>Parity plus &lt; 4 Seconds</i>	NA	0

Table 1-22 lists the KPMG Consulting Evaluation Criteria, Results and Comments for the Pre-Ordering Transaction Test Report Generation analysis.

**Table 1-22: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-1-13	Evaluated metrics produced during the test period met the requirements as demonstrated by KPMG Consulting statistical tests.	Not Applicable	BA-MA EnView log files do not differentiate KPMG Consulting pre-order transactions.
PMR-1-1-14	Evaluate consistency between BA-MA data regarding the KPMG Consulting test and the KPMG Consulting test results.	Not Applicable	BA-MA EnView log files do not differentiate KPMG Consulting pre-order transactions.

### 3.1.3.2 Ordering

KPMG Consulting calculated C2C metrics values, where applicable for KPMG Consulting LSOG2 production and volume orders submitted from May 11, 2000 through July 5, 2000.

KPMG Consulting found that for UNE POTS Platform production orders, BA-MA appeared to fail the standard for metrics OR-1-04 and OR-2-04. KPMG Consulting investigated each PON that was not confirmed or rejected on time and found that the PONs were actually submitted as Complex ISDN orders and were confirmed or rejected on time (within 72 hours for Complex orders). BA-MA classifies Complex orders as POTS orders in its transaction data.

Tables 1-23 lists the C2C metrics values, where applicable, for KPMG Consulting LSOG2 production orders submitted from May 11, 2000 through July 5, 2000.

**Table 1-23: PMR1 Metrics Values for KPMG Consulting LSOG2 Production**

Metric #	Metric Description	Standard	KPMG Value	KPMG Count
<b>RESALE -- POTS &amp; Pre-qualified Complex</b>				
OR-1-01	Average Local Service Request Confirmation (LSRC) Time (Flowthrough)	<i>No Standard</i>	0.01	84
OR-1-02	% On Time LSRC – Flowthrough	<i>95% within 2 Hours</i>	100.00	84
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	14.51	148
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 24 Hours</i>	98.65	148
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-01	Average Local Service Request (LSR) Reject - Time (Flowthrough)	<i>No Standard</i>	0.00	48
OR-2-02	% On Time LSR Reject – Flowthrough	<i>95% within 2 Hours</i>	100.00	48
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	11.67	124
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 24 Hours</i>	100.00	124
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
<b>RESALE -- Complex Services</b>				
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	NA	0
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	NA	0
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0

Metric #	Metric Description	Standard	KPMG Value	KPMG Count
<b>RESALE – POTS/Special Services - Aggregate</b>				
OR-3-01	% Rejects	<i>No Standard</i>	58.90	292
OR-4-01	Completion Notice – Avg. Response Time	<i>No Standard</i>	0.00	204
OR-4-02	Completion Notice – % On Time	<i>95% by next business day at noon</i>	100.00	204
OR-4-04	Work Completion Notice – Average Response Time	<i>No Standard</i>	0.00	210
OR-4-05	Work Completion Notice – % On Time	<i>95% by next business day at noon</i>	100.00	210
OR-5-01	% Flowthrough - Total	<i>No Standard</i>	36.21	232
OR-5-02	% Flowthrough - Simple	<i>No Standard</i>	36.21	232
<b>RESALE – Special Services</b>				
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	NA	0
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 48 Hours</i>	NA	0
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	NA	0
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 48 Hours</i>	NA	0
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
<b>UNE – Platform</b>				
OR-1-01	Average Local Service Request Confirmation (LSRC) Time (Flowthrough)	<i>No Standard</i>	0.01	91
OR-1-02	% On Time LSRC – Flowthrough	<i>95% within 2 Hours</i>	100.00	91
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	12.12	139
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 24 Hours</i>	92.81	139
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-01	Average Local Service Request (LSR) Reject - Time (Flowthrough)	<i>No Standard</i>	0.01	34
OR-2-02	% On Time LSR Reject – Flowthrough	<i>95% within 2 Hours</i>	100.00	34
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	12.94	49
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 24 Hours</i>	83.67	49
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0

Metric #	Metric Description	Standard	KPMG Value	KPMG Count
<b>UNE – Loop/Pre-Qualified Complex/LNP</b>				
OR-1-01	Average Local Service Request Confirmation (LSRC) Time (Flowthrough)	No Standard	0.04	97
OR-1-02	% On Time LSRC – Flowthrough	95% within 2 Hours	98.97	97
OR-1-03	Average LSRC Time < 10 Lines	No Standard	6.31	220
OR-1-04	% On Time LSRC < 10 Lines	95% within 24 Hours	100.00	220
OR-1-05	Average LSRC Time >= 10 Lines	No Standard	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	95% within 72 Hours	NA	0
OR-2-01	Average Local Service Request (LSR) Reject - Time (Flowthrough)	No Standard	0.01	51
OR-2-02	% On Time LSR Reject – Flowthrough	95% within 2 Hours	100.00	51
OR-2-03	Average LSR Reject Time < 10 Lines	No Standard	5.54	76
OR-2-04	% On Time LSR Reject < 10 Lines	95% within 24 Hours	100.00	76
OR-2-05	Average LSR Reject Time >= 10 Lines	No Standard	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	95% within 72 Hours	NA	0
<b>UNE – Complex Services</b>				
OR-1-03	Average LSRC Time < 10 Lines	No Standard	NA	0
OR-1-04	% On Time LSRC < 10 Lines (Electronic)	95% within 72 Hours	NA	0
OR-1-05	Average LSRC Time >= 10 Lines	No Standard	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	95% within 72 Hours	NA	0
OR-2-03	Average LSR Reject Time < 10 Lines	No Standard	NA	0
OR-2-04	% On Time LSR Reject < 10 Lines	95% within 72 Hours	NA	0
OR-2-05	Average LSR Reject Time >= 10 Lines	No Standard	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	95% within 72 Hours	NA	0
<b>UNE – POTS/Special Services – Aggregate</b>				
OR-3-01	% Rejects	No Standard	35.71	588
OR-4-01	Completion Notice – Avg. Response Time	No Standard	0.00	426
OR-4-02	Completion Notice – % On Time	95% by next business day at noon	100.00	426
OR-4-04	Work Completion Notice – Average Response Time	No Standard	0.00	428
OR-4-05	Work Completion Notice – % On Time	95% by next business day at noon	100.00	428
OR-5-01	% Flowthrough – Total	No Standard	34.37	547
OR-5-02	% Flowthrough – Simple	No Standard	34.37	547

Metric #	Metric Description	Standard	KPMG Value	KPMG Count
<b>UNE – Special Services</b>				
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	NA	0
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 48 Hours</i>	NA	0
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	NA	0
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 48 Hours</i>	NA	0
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0

Tables 1-24 lists the C2C metrics values, where applicable, for KPMG Consulting LSOG4 production orders submitted from May 11, 2000 through July 5, 2000.

**Table 1-24: PMR1 Metrics Values for KPMG Consulting LSOG4 Production**

Metric #	Metric Description	Standard	KPMG Value	KPMG Count
<b>RESALE -- POTS &amp; Pre-qualified Complex</b>				
OR-1-01	Average Local Service Request Confirmation (LSRC) Time (Flowthrough)	<i>No Standard</i>	0.03	31
OR-1-02	% On Time LSRC – Flowthrough	<i>95% within 2 Hours</i>	100.00	31
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	9.13	19
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 24 Hours</i>	100.00	19
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	14.63	2
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	100.00	2
OR-2-01	Average Local Service Request (LSR) Reject - Time (Flowthrough)	<i>No Standard</i>	0.01	17
OR-2-02	% On Time LSR Reject – Flowthrough	<i>95% within 2 Hours</i>	100.00	17
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	10.95	24
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 24 Hours</i>	100.00	24
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	6.66	3
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	100.00	3
<b>RESALE -- Complex Services</b>				
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	14.48	12
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 72 Hours</i>	100.00	12
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	18.61	3
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	100.00	3

<b>Metric #</b>	<b>Metric Description</b>	<b>Standard</b>	<b>KPMG Value</b>	<b>KPMG Count</b>
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	13.98	4
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 72 Hours</i>	100.00	4
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
<b>RESALE – POTS/Special Services - Aggregate</b>				
OR-3-01	% Rejects	<i>No Standard</i>	45.37	108
OR-4-01	Completion Notice – Avg. Response Time	<i>No Standard</i>	1.77	61
OR-4-02	Completion Notice – % On Time	<i>95% by next business day at noon</i>	63.93	61
OR-4-04	Work Completion Notice – Average Response Time	<i>No Standard</i>	0.00	66
OR-4-05	Work Completion Notice – % On Time	<i>95% by next business day at noon</i>	100.00	66
OR-5-01	% Flowthrough - Total	<i>No Standard</i>	42.47	73
OR-5-02	% Flowthrough - Simple	<i>No Standard</i>	59.62	52
<b>RESALE – Special Services</b>				
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	7.22	6
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 48 Hours</i>	100.00	6
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	16.10	1
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 48 Hours</i>	100.00	1
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
<b>UNE – Platform</b>				
OR-1-01	Average Local Service Request Confirmation (LSRC) Time (Flowthrough)	<i>No Standard</i>	0.05	30
OR-1-02	% On Time LSRC – Flowthrough	<i>95% within 2 Hours</i>	100.00	30
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	9.78	24
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 24 Hours</i>	95.83	24
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	59.72	2
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	100.00	2
OR-2-01	Average Local Service Request (LSR) Reject - Time (Flowthrough)	<i>No Standard</i>	0.01	9
OR-2-02	% On Time LSR Reject – Flowthrough	<i>95% within 2 Hours</i>	100.00	9
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	19.72	19
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 24 Hours</i>	78.95	19

Metric #	Metric Description	Standard	KPMG Value	KPMG Count
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
<b><i>UNE – Loop/Pre-Qualified Complex/LNP</i></b>				
OR-1-01	Average Local Service Request Confirmation (LSRC) Time (Flowthrough)	<i>No Standard</i>	0.04	20
OR-1-02	% On Time LSRC – Flowthrough	<i>95% within 2 Hours</i>	100.00	20
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	4.94	41
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 24 Hours</i>	100.00	41
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	3.82	1
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	100.00	1
OR-2-01	Average Local Service Request (LSR) Reject - Time (Flowthrough)	<i>No Standard</i>	0.03	17
OR-2-02	% On Time LSR Reject – Flowthrough	<i>95% within 2 Hours</i>	100.00	17
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	4.05	33
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 24 Hours</i>	100.00	33
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	0.83	1
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	100.00	1
<b><i>UNE – Complex Services</i></b>				
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	NA	0
OR-1-04	% On Time LSRC < 10 Lines (Electronic)	<i>95% within 72 Hours</i>	NA	0
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	NA	0
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
<b><i>UNE – POTS/Special Services – Aggregate</i></b>				
OR-3-01	% Rejects	<i>No Standard</i>	47.59	166
OR-4-01	Completion Notice – Avg. Response Time	<i>No Standard</i>	0.77	64
OR-4-02	Completion Notice – % On Time	<i>95% by next business day at noon</i>	57.81	64
OR-4-04	Work Completion Notice – Average Response Time	<i>No Standard</i>	0.00	67
OR-4-05	Work Completion Notice – % On Time	<i>95% by next business day at noon</i>	100.00	67
OR-5-01	% Flowthrough - Total	<i>No Standard</i>	41.67	120
OR-5-02	% Flowthrough - Simple	<i>No Standard</i>	42.37	118

Metric #	Metric Description	Standard	KPMG Value	KPMG Count
<b>UNE – Special Services</b>				
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	11.83	2
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 48 Hours</i>	100.00	2
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	NA	0
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 48 Hours</i>	NA	0
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0

Table 1-25 lists the C2C metrics values, where applicable, for KPMG Consulting LSOG2 stress and volume transactions submitted from May 11, 2000 through June 25, 2000.

**Table 1-25: PMRI Metrics Values for KPMG Consulting Stress and Volume**

Metric #	Metric Description	Standard	KPMG Value	KPMG Count
<b>RESALE -- POTS &amp; Pre-qualified Complex</b>				
OR-1-01	Average Local Service Request Confirmation (LSRC) Time (Flowthrough)	<i>No Standard</i>	0.02	4996
OR-1-02	% On Time LSRC – Flowthrough	<i>95% within 2 Hours</i>	100.00	4996
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	NA	0
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 24 Hours</i>	NA	0
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-01	Average Local Service Request (LSR) Reject - Time (Flowthrough)	<i>No Standard</i>	0.00	194
OR-2-02	% On Time LSR Reject – Flowthrough	<i>95% within 2 Hours</i>	100.00	194
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	20.32	1
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 24 Hours</i>	100.00	1
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0

Metric #	Metric Description	Standard	KPMG Value	KPMG Count
<b>RESALE -- Complex Services</b>				
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	NA	0
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	NA	0
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
<b>RESALE – POTS/Special Services – Aggregate</b>				
OR-3-01	% Rejects	<i>No Standard</i>	3.76	5191
OR-4-01	Completion Notice – Avg. Response Time	<i>No Standard</i>	NA	0
OR-4-02	Completion Notice – % On Time	<i>95% by next business day at noon</i>	NA	0
OR-4-04	Work Completion Notice – Average Response Time	<i>No Standard</i>	0.00	107
OR-4-05	Work Completion Notice – % On Time	<i>95% by next business day at noon</i>	100.00	107
OR-5-01	% Flowthrough - Total	<i>No Standard</i>	100.00	4996
OR-5-02	% Flowthrough - Simple	<i>No Standard</i>	100.00	4996
<b>RESALE – Special Services</b>				
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	NA	0
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 48 Hours</i>	NA	0
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	NA	0
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 48 Hours</i>	NA	0
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0

Metric #	Metric Description	Standard	KPMG Value	KPMG Count
<b>UNE – Platform</b>				
OR-1-01	Average Local Service Request Confirmation (LSRC) Time (Flowthrough)	<i>No Standard</i>	0.03	11554
OR-1-02	% On Time LSRC – Flowthrough	<i>95% within 2 Hours</i>	100.00	11554
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	7.91	938
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 24 Hours</i>	100.00	938
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-01	Average Local Service Request (LSR) Reject - Time (Flowthrough)	<i>No Standard</i>	0.01	6
OR-2-02	% On Time LSR Reject – Flowthrough	<i>95% within 2 Hours</i>	100.00	6
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	NA	0
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 24 Hours</i>	NA	0
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
<b>UNE – Loop/Pre-Qualified Complex/LNP</b>				
OR-1-01	Average Local Service Request Confirmation (LSRC) Time (Flowthrough)	<i>No Standard</i>	0.07	2850
OR-1-02	% On Time LSRC – Flowthrough	<i>95% within 2 Hours</i>	100.00	2850
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	3.89	265
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 24 Hours</i>	100.00	265
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-01	Average Local Service Request (LSR) Reject - Time (Flowthrough)	<i>No Standard</i>	NA	0
OR-2-02	% On Time LSR Reject – Flowthrough	<i>95% within 2 Hours</i>	NA	0
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	NA	0
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 24 Hours</i>	NA	0
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0

Metric #	Metric Description	Standard	KPMG Value	KPMG Count
<b>UNE – Complex Services</b>				
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	NA	0
OR-1-04	% On Time LSRC < 10 Lines (Electronic)	<i>95% within 72 Hours</i>	NA	0
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	NA	0
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
<b>UNE – POTS/Special Services – Aggregate</b>				
OR-3-01	% Rejects	<i>No Standard</i>	0.04	15613
OR-4-01	Completion Notice – Avg. Response Time	<i>No Standard</i>	NA	0
OR-4-02	Completion Notice – % On Time	<i>95% by next business day at noon</i>	NA	0
OR-4-04	Work Completion Notice – Average Response Time	<i>No Standard</i>	NA	0
OR-4-05	Work Completion Notice – % On Time	<i>95% by next business day at noon</i>	NA	0
OR-5-01	% Flowthrough - Total	<i>No Standard</i>	92.29	15607
OR-5-02	% Flowthrough - Simple	<i>No Standard</i>	92.29	15607
<b>UNE – Special Services</b>				
OR-1-03	Average LSRC Time < 10 Lines	<i>No Standard</i>	NA	0
OR-1-04	% On Time LSRC < 10 Lines	<i>95% within 48 Hours</i>	NA	0
OR-1-05	Average LSRC Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-1-06	% On Time LSRC >= 10 Lines	<i>95% within 72 Hours</i>	NA	0
OR-2-03	Average LSR Reject Time < 10 Lines	<i>No Standard</i>	NA	0
OR-2-04	% On Time LSR Reject < 10 Lines	<i>95% within 48 Hours</i>	NA	0
OR-2-05	Average LSR Reject Time >= 10 Lines	<i>No Standard</i>	NA	0
OR-2-06	% On Time LSR Reject >= 10 Lines	<i>95% within 72 Hours</i>	NA	0

Table 1-26 lists the KPMG Consulting Evaluation Criteria, Results and Comments for the Ordering Transaction Test Report Generation analysis.

**Table 1-26: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-2-13	Evaluated metrics produced during the test period met the requirements as demonstrated by KPMG Consulting statistical tests.	Satisfied	Ordering metrics values for KPMG Consulting LSOG2 production and volume orders met the standards set in the NYC2C Guidelines.
PMR-1-2-14	Evaluate consistency between BA-MA data regarding the KPMG Consulting test and the KPMG Consulting test results.	Satisfied	<p>BA-MA data were consistent with KPMG Consulting data. In particular, the BA-MA Receipt dates and times, 1<sup>st</sup> confirmation dates and times, and 1<sup>st</sup> Reject dates and times were consistent with KPMG Consulting's Local Service Request dates and times, Local Service Confirmation dates and times, System Error Message dates and times respectively. KPMG Consulting verified that the short-term fix was implemented and that BA-MA correctly classified all Complex orders in its May transaction date.</p> <p>The BA-MA service order classification fields were not consistent with the KPMG Consulting test results. BA-MA classified Complex ISDN orders as POTS orders in its transaction data during the test period. BA-MA has responded that it will implement a short-term fix (on July 14, 2000) and a long-term fix (on September 1, 2000) to properly identify Complex orders. KPMG Consulting verified that the short-term fix was implemented and that BA-MA correctly classified all Complex orders in its May transaction data. This service order classification discrepancy does not invalidate the successful conclusion of the test in this domain taken as a whole.</p>

### 3.1.3.3 Provisioning

KPMG Consulting calculated C2C metrics values, where applicable for KPMG Consulting production and volume orders submitted from May 11, 2000 through June 25, 2000.

Table 1-27 lists the C2C metrics values, where applicable, for KPMG Consulting provisioned orders submitted from May 16, 2000 through June 30, 2000. The NYC2C standards mandate that KPMG Consulting performance be at parity with the BA-MA retail performance.

**Table 1-27: PMR1 Metrics Values for KPMG Consulting Provisioned Orders**

Metric #	Metric Description	Retail Value	KPMG Value	BA-MA Value	KPMG Value
<b>RESALE – POTS</b>					
PR-1-04-2100	Average Interval Offered – Dispatch (6-9 Lines)	7.39	NA	375	0
PR-1-05-2100	Average Interval Offered – Dispatch (>= 10 Lines)	8.97	NA	303	0
PR-2-04-2100	Average Interval Completed - Dispatch (6-9 Lines)	7.14	NA	307	0
PR-2-05-2100	Average Interval Completed - Dispatch (>= 10 Lines)	8.69	NA	241	0
PR-3-01-2100	% Completed in 1 Day (1-5 Lines - No Dispatch)	79.99	44.86	220916	107
PR-3-02-2100	% Completed in 2 Days (1-5 Lines - No Dispatch)	88.67	75.70	220916	107
PR-3-03-2100	% Completed in 3 Days (1-5 Lines - No Dispatch)	91.08	85.05	220916	107
PR-3-04-2100	% Completed in 1 Day (1-5 Lines - Dispatch)	22.33	66.67	31786	6
PR-3-05-2100	% Completed in 2 Days (1-5 Lines - Dispatch)	28.53	83.33	31786	6
PR-3-06-2100	% Completed in 3 Days (1-5 Lines - Dispatch)	36.91	83.33	31786	6
PR-3-07-2100	% Completed in 4 Days (1-5 Lines - Total)	87.82	87.61	252700	113
PR-3-08-2100	% Completed in 5 Days (1-5 Lines – No Dispatch)	95.57	90.65	220916	107
PR-3-09-2100	% Completed in 5 Days (1-5 Lines – Dispatch)	75.28	100.00	31786	6

Metric #	Metric Description	Retail Value	KPMG Value	BA-MA Value	KPMG Value
PR-3-10-2100	% Completed in 6 Days (1-5 Lines - Total)	94.68	93.81	252700	113
PR-4-02-2100	Average Delay Days – Total	2.84	NA	4793	0
PR-4-03-2100	% Missed Appointment – Customer	1.63	1.25		
PR-4-04-2100	% Missed Appointment – Bell Atlantic – Dispatch	7.12	0.00	62094	15
PR-4-05-2100	% Missed Appointment – Bell Atlantic – No Dispatch	0.12	0.00	322894	225
PR-4-08-2100	% Missed Appt. – Customer – Late Order Confirmation		0.00		240
PR-5-01-2100	% Missed Appointment – Bell Atlantic – Facilities	0.66	0.00	384988	240
PR-5-02-2100	% Orders Held for Facilities > 15 Days	0.01	0.00	384988	240
PR-5-03-2100	% Orders Held for Facilities > 60 Days	0.00	0.00	384988	240
<b>RESALE – POTS – Business</b>					
PR-1-01-2110	Average Interval Offered – Total No Dispatch	1.31	4.78	25395	64
PR-1-03-2110	Average Interval Offered – Dispatch (1-5 Lines)	4.87	2.00	2986	1
PR-2-01-2110	Average Interval Completed – Total No Dispatch	1.22	4.78	24825	64
PR-2-03-2110	Average Interval Completed – Dispatch (1-5 Lines)	5.24	2.00	2693	1
<b>RESALE – POTS – Residence</b>					
PR-1-01-2120	Average Interval Offered – Total No Dispatch	0.97	1.51	264098	73
PR-1-03-2120	Average Interval Offered – Dispatch (1-5 Lines)	4.58	1.80	31832	5
PR-2-01-2120	Average Interval Completed – Total No Dispatch	0.91	1.41	261815	71
PR-2-03-2120	Average Interval Completed – Dispatch (1-5 Lines)	4.74	1.80	29089	5
<b>RESALE – POTS &amp; Complex Aggregate</b>					
PR-1-10-2103	Average Interval Offered – Disconnects – No Dispatch	5.09	NA	46105	0
PR-1-11-2103	Average Interval Offered – Disconnects – Dispatch	5.71	NA	28	0

Metric #	Metric Description	Retail Value	KPMG Value	BA-MA Value	KPMG Value
PR-2-10-2103	Average Interval Completed – Disconnects – No Dispatch	5.00	NA	46014	0
PR-2-11-2103	Average Interval Completed – Disconnects – Dispatch	5.71	NA	28	0
<b>RESALE – Complex Services</b>					
PR-1-01-2300	Average Interval Offered – Total No Dispatch	5.41	2.23	4947	22
PR-1-02-2300	Average Interval Offered – Total Dispatch	7.65	NA	1188	0
PR-2-01-2300	Average Interval Completed – Total No Dispatch	5.43	2.23	4722	22
PR-2-02-2300	Average Interval Completed – Total Dispatch	7.73	NA	1013	0
PR-4-02-2300	Average Delay Days – Total	4.89	NA	122	0
PR-4-03-2300	% Missed Appointment – Customer	4.86	0.00		
PR-4-04-2300	% Missed Appointment – Bell Atlantic – Dispatch	4.92	0.00	2113	1
PR-4-05-2300	% Missed Appointment – Bell Atlantic – No Dispatch	0.34	0.00	5291	22
PR-4-08-2300	% Missed Appt. – Customer – Late Order Confirmation		0.00		23
<b>RESALE – Special Services – Provisioning</b>					
PR-1-01	Average Interval Offered – Total No Dispatch	5.20	15.00	7104	1
PR-1-02	Average Interval Offered – Total Dispatch	10.27	2.00	2543	1
PR-1-06	Average Interval Offered – DS0	11.56	NA	724	0
PR-1-07	Average Interval Offered – DS1	6.84	15.00	6023	1
PR-1-08	Average Interval Offered – DS3	14.00	NA	2	0
PR-1-10	Average Interval Offered – Disconnects – No Dispatch	4.81	NA	473	0
PR-1-11	Average Interval Offered – Disconnects – Dispatch	0.00	NA	0	0
PR-2-01	Average Interval Completed – Total No Dispatch	5.07	11.00	6716	1
PR-2-02	Average Interval Completed – Total Dispatch	10.72	2.00	1604	1

Metric #	Metric Description	Retail Value	KPMG Value	BA-MA Value	KPMG Value
PR-2-06	Average Interval Completed – DS0	10.74	NA	469	0
PR-2-07	Average Interval Completed – DS1	6.69	11.00	5517	1
PR-2-08	Average Interval Completed – DS3	14.00	NA	2	0
PR-2-10	Average Interval Offered – Disconnects – No Dispatch	4.72	NA	467	0
PR-2-11	Average Interval Offered – Disconnects – Dispatch	0.00	NA	0	0
PR-4-01	% Missed Appointment – Bell Atlantic – Total	0.99	0.00	10228	6
PR-4-02	Average Delay Days – Total	4.34	NA	101	0
PR-4-03	% Missed Appointment – Customer	6.98	NA		
PR-4-04	% Missed Appt. – Customer – Due to Late Order Confirmation		0.00		6
PR-5-01	% Missed Appointment – Bell Atlantic – Facilities	0.15	0.00	10228	6
PR-5-02	% Orders Held for Facilities > 15 Days	0.01	0.00	10228	6
PR-5-03	% Orders Held for Facilities > 60 Days	0.00	0.00	10228	6
<b>UNE – POTS – Provisioning</b>					
PR-1-01-3111	Av. Interval Offered - Total No Dispatch - Hot Cut Loop		6.78		18
PR-1-01-3122	Av. Interval Offered - Total No Dispatch - Other (UNE Switch & INP)	1.31	NA	25395	0
PR-1-01-3140	Av. Interval Offered - Total No Dispatch - Platform	1.31	5.28	25395	61
PR-1-03-3112	Av. Interval Offered – Dispatch (1-5 Lines) – Loop	4.87	5.00	2986	8
PR-1-03-3140	Av. Interval Offered – Dispatch (1-5 Lines) - Platform	4.87	5.33	2986	3
PR-1-04-3112	Av. Interval Offered – Dispatch (6-9 Lines) - Loop	7.39	NA	375	0
PR-1-04-3140	Av. Interval Offered – Dispatch (6-9 Lines) - Platform	7.39	NA	375	0
PR-1-05-3112	Av. Interval Offered – Dispatch (>= 10 Lines) – Loop	8.97	NA	303	0
PR-1-05-3140	Av. Interval Offered – Dispatch (>= 10 Lines) - Platform	8.97	NA	303	0

Metric #	Metric Description	Retail Value	KPMG Value	BA-MA Value	KPMG Value
PR-2-01-3111	Av. Completed Interval – Total No Dispatch – Hot Cut Loop		6.78		18
PR-2-01-3122	Av. Completed Interval – Total No Dispatch - Other (UNE Switch & INP)	1.22	NA	24825	0
PR-2-01-3140	Av. Completed Interval – Total No Dispatch – Platform	1.22	4.59	24825	68
PR-2-03-3112	Av. Completed Interval – Dispatch (1-5 Lines) – Loop	5.24	4.63	2693	8
PR-2-03-3140	Av. Completed Interval – Dispatch (1-5 Lines) - Platform	5.24	5.33	2693	3
PR-2-04-3112	Av. Completed Interval – Dispatch (6-9 Lines) – Loop	7.14	NA	307	0
PR-2-04-3140	Av. Completed Interval - Dispatch (6-9 Lines) - Platform	7.14	NA	307	0
PR-2-05-3112	Av. Completed Interval - Dispatch (>= 10 Lines) – Loop	8.69	NA	241	0
PR-2-05-3140	Av. Completed Interval - Dispatch (>= 10 Lines) - Platform	8.69	NA	241	0
PR-3-01-3142	% Completed in 1 Day (1-5 Lines - No Dispatch)	79.99	4.62	220916	65
PR-3-02-3142	% Completed in 2 Days (1-5 Lines - No Dispatch)	88.67	23.08	220916	65
PR-3-03-3142	% Completed in 3 Days (1-5 Lines - No Dispatch)	91.08	47.69	220916	65
PR-3-04-3142	% Completed in 1 Day (1-5 Lines - Dispatch)	22.33	0.00	31786	3
PR-3-05-3142	% Completed in 2 Days (1-5 Lines - Dispatch)	28.53	33.33	31786	3
PR-3-06-3142	% Completed in 3 Days (1-5 Lines - Dispatch)	36.91	33.33	31786	3
PR-3-07-3142	% Completed in 4 Days (1-5 Lines - Total)	87.82	58.82	252700	68
PR-3-08-3142	% Completed in 5 Days (1-5 Lines – No Dispatch)	95.57	72.31	220916	65
PR-3-09-3142	% Completed in 5 Days (1-5 Lines – Dispatch)	75.28	66.67	31786	3
PR-3-10-3142	% Completed in 6 Days (1-5 Lines - Total)	94.68	72.06	252700	68

Metric #	Metric Description	Retail Value	KPMG Value	BA-MA Value	KPMG Value
PR-4-02-3100	Average Delay Days – Total	2.84	NA	4793	0
PR-4-03-3100	% Missed Appt. – Customer	1.63	1.19		
PR-4-04-3113	% Missed Appt. – Bell Atlantic – Dispatch - Loop New	7.12	0.00	62094	5
PR-4-04-3140	% Missed Appt. – Bell Atlantic – Dispatch - Platform	7.12	0.00	62094	8
PR-4-04-3520	% Missed Appt. – Bell Atlantic – Dispatch - Hot Cut	7.12	0.00	62094	1
PR-4-05-3111	% Missed Appt. – Bell Atlantic – No Dispatch - Hot Cut Loop	0.12	0.00	322894	18
PR-4-05-3121	% Missed Appt. – Bell Atlantic – No Dispatch – Other	0.12	NA	322894	0
PR-4-05-3140	% Missed Appt. – Bell Atlantic – No Dispatch - Platform	0.12	0.00	322894	249
PR-5-01-3100	% Missed Appointment – Bell Atlantic – Facilities	0.66	0.00	384988	301
PR-5-02-3100	% Orders Held for Facilities > 15 Days	0.01	0.00	384988	301
PR-5-03-3100	% Orders Held for Facilities > 60 Days	0.00	0.00	384988	301
<b>UNE - POTS &amp; Complex Aggregate</b>					
PR-1-10-3133	Av. Interval Offered - Disconnects – No Dispatch	5.09	NA	46105	0
PR-1-11-3133	Av. Interval Offered - Disconnects – Dispatch	5.71	NA	28	0
PR-2-10-3133	Av. Completed Interval - Disconnects – No Dispatch	5.00	NA	46014	0
PR-2-11-3133	Av. Completed Interval - Disconnects – Dispatch	5.71	NA	28	0
<b>UNE - Complex Services</b>					
PR-1-01-3300	Av. Interval Offered – Total No Dispatch	5.41	6.00	4947	1
PR-1-02-3300	Av. Interval Offered – Total Dispatch	7.65	6.00	1188	2
PR-2-01-3300	Av. Interval Completed – Total No Dispatch	5.43	6.00	4722	1

Metric #	Metric Description	Retail Value	KPMG Value	BA-MA Value	KPMG Value
PR-2-02-3300	Av. Interval Completed – Total Dispatch	7.73	6.00	1013	2
PR-4-02-3300	Average Delay Days – Total	4.89	1.00	122	1
PR-4-03-3300	% Missed Appointment – Customer	4.86	0.00		
PR-4-04-3300	% Missed Appointment – Bell Atlantic – Dispatch	4.92	3.13	2113	32
PR-4-05-3300	% Missed Appointment – Bell Atlantic – No Dispatch	0.34	0.00	5291	18
PR-4-08-3300	% Missed Appt. – Customer – Late Order Confirmation		0.00		50
<b>UNE - Special Services – Provisioning</b>					
PR-1-01-3200	Av. Interval Offered – Total No Dispatch	5.20	NA	7104	0
PR-1-02-3200	Av. Interval Offered – Total Dispatch	10.27	10.00	2543	9
PR-1-06-3200	Av. Interval Offered – DS0	11.56	NA	724	0
PR-1-07-3200	Av. Interval Offered – DS1	6.84	10.00	6023	9
PR-1-08-3200	Av. Interval Offered – DS3	14.00	NA	2	0
PR-1-10-3200	Av. Interval Offered – Disconnects – No Dispatch	4.81	NA	473	0
PR-1-11-3200	Av. Interval Offered – Disconnects – Dispatch	0.00	NA	0	0
PR-2-01-3200	Av. Interval Completed – Total No Dispatch	5.07	NA	6716	0
PR-2-02-3200	Av. Interval Completed – Total Dispatch	10.72	10.00	1604	9
PR-2-06-3200	Av. Interval Completed – DS0	10.74	NA	469	0
PR-2-07-3200	Av. Interval Completed – DS1	6.69	10.00	5517	9
PR-2-08-3200	Av. Interval Completed – DS3	14.00	NA	2	0
PR-2-10-3200	Av. Interval Offered – Disconnects – No Dispatch	4.72	NA	467	0

Metric #	Metric Description	Retail Value	KPMG Value	BA-MA Value	KPMG Value
PR-2-11-3200	Av. Interval Offered – Disconnects – Dispatch	NA	NA	0	0
PR-4-01-3200	% Missed Appointment – Bell Atlantic – Total	0.99	0.00	10228	12
PR-4-01-3530	% Missed Appointment – Bell Atlantic – Total- IOF	0.99	NA	10228	0
PR-4-02-3200	Average Delay Days – Total	4.34	NA	101	0
PR-4-02-3530	Average Delay Days – Total - IOF	4.34	NA	101	0
PR-4-03-3200	% Missed Appointment – Customer	6.98	0.00		
PR-4-08-3200	% Missed Appt. – Customer – Late Order Confirmation		0.00		12
PR-5-01-3200	% Missed Appointment – Bell Atlantic – Facilities	0.15	0.00	10228	12
PR-5-02-3200	% Orders Held for Facilities > 15 Days	0.01	0.00	10228	12
PR-5-03-3200	% Orders Held for Facilities > 60 Days	0.00	0.00	10228	12

Table 1-28 lists the KPMG Consulting Evaluation Criteria, Results and Comments for the Provisioning Transaction Test Report Generation analysis.

**Table 1-28: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-3-13	Evaluated metrics produced during the test period met the requirements as demonstrated by KPMG Consulting statistical tests.	Satisfied	<p>KPMG Consulting Provisioning metrics met the parity standards for 46 out of 72 applicable metrics.</p> <p>Ten of the 26 metrics that failed to meet parity standards, PR-3 (Completed within X Days), are not comparable to BA-MA for the standard because the distribution of KPMG Consulting orders to be provisioned is different than that of BA-MA retail. This difference in distribution distorts the true performance of BA-MA. For example, 22.7% of KPMG Consulting's transactions were required to be completed within 3 days, whereas only 5.1% of BA-MA retail orders are required to be completed within 3 days. Refer to the spreadsheet entitled "CompareApplntvBtwRetailKCI.xls" for detail on the distribution comparison.</p> <p>There are 11 metrics with fewer than 4 KPMG Consulting test samples. No statistical tests were conducted.</p> <p>There are only 4 metrics that failed the statistical tests: Average Interval Offered and Completed for Total No Dispatch Platform, Average Interval Offered and Completed for POTS Business Total No Dispatch.</p> <p>The evaluation result is based on the acceptance that 4 out of 76 metrics failed the statistical tests.</p>

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-3-14	Evaluate consistency between BA-MA data regarding the KPMG Consulting test and the KPMG Consulting test results.	Satisfied	KPMG Consulting compared BA-MA test data for Provisioning metrics with internal transaction test data. BA-MA Provisioning data were found to be consistent with KPMG Consulting test data as there were no material differences in the recorded data. Refer the spreadsheet entitled “KPMG C2C PR Metrics Results June 30.xls” for details on the consistency of BA-MA and the KPMG Consulting test results.

#### 3.1.3.4 Maintenance and Repair

PMR1 calculated retail Trouble Reporting metrics and resale service intervals for the transaction test period based on data provided by BA-MA. KPMG Consulting then conducted statistical tests for parity. In these tests, PMR1 compared these retail metrics values with metrics values generated by KPMG Consulting transactions. The M&R2 report lists these results.

PMR1 also conducted statistical tests for degradation of services. In these tests, PMR1 compared KPMG Consulting transactions under Normal, Peak and Stress volumes. More specifically, PMR1 conducted permutation tests for X-History Response Time and SARTS Specials Response Time. PMR1 also conducted hypergeometric tests for SARTS Specials Success Rates and one-sample t-tests for History and Status Response Time metrics.

Table 1-29 lists the KPMG Consulting Evaluation Criteria, Results and Comments for the Maintenance and Repair Transaction Test Report Generation analysis.

**Table 1-29: PMR1 Evaluation Criteria and Results**

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-4-13	Evaluated metrics produced during the test period met the requirements as demonstrated by KPMG Consulting statistical tests.	Satisfied	The PMR evaluation worked with the M&R2 testing team to evaluate degradation using hypergeometric and one-sample t-tests.
PMR-1-4-14	Evaluate consistency between BA-MA data regarding the KPMG Consulting test and the KPMG Consulting test results.	Not Applicable	The PMR evaluation worked with the M&R2 testing team to evaluate BA-MA retail and resale BA-MA OSS Trouble Reporting metrics values and security intervals.

#### 3.1.3.5 Billing, Network Performance and Operator Services

The PMR evaluation did not conduct Transaction Test Report Generation tests for the Billing, Network Performance and Operator Services domains as the actual BA-MA filtered data did not identify KPMG Consulting transactions.



# **APPENDIX A**



Term	Definition
271 Application	An application to offer long distance services from an RBOC to a state or federal regulatory agency. In order to grant this application, the agency must find the applicant is in compliance with the 14 point competitive checklist described in the 1996 Telecommunications Act.
ACNA	Access Carrier Name Abbreviation. A three to four character code used to identify a telecommunications carrier.
AECN	Alternate Exchange Carrier Name. A unique identifier for a CLEC. Bellcore only recognizes this term as Exchange Carrier Code (ECC).
AMA	Automatic Message Accounting. A system that records and documents billing information for (long distance) calls made by a subscriber.
ASR	Access Service Request. Form used to order interoffice facilities such as dedicated trunk ports.
BA-MA	Bell Atlantic Massachusetts
BATC	Business Account Team Center
BDT	Bill Data Tape. Format in which end user account bills are transmitted to the CLEC/Reseller.
Bill Certification	Process by which Bell Atlantic demonstrates billing process management to its Reseller customers.
Bill Cycle	<p>The grouping of customers for purposes of billing. An end-user normally belongs to one bill cycle. In Wholesale billing, all end-users belonging to the same bill cycle are aggregated onto a single CLEC bill. Assignments of cycle and period are accomplished by Bell Atlantic.</p> <p>Bill cycles enable even distribution of a large number of customers so as to allow efficient use of computing resources and to mitigate risks associated with computer failures.</p>
Bill Cycle Balancing	The procedure by which the charges associated with the inputs of a billing cycle are reconciled with the charges of the outputs of the billing cycle.
Bill Period	The length of time covered by a customer bill. Each end-user has one bill per bill period. CLECs receive one bill per bill period and bill cycle for all end-users belonging to that period and cycle. Assignments of cycle and period are accomplished by Bell Atlantic.
Billing Domain	Tests related to creation of correct carrier bills.
BTN	Billing Telephone Number. The number to which charges from a given telephone service are billed.

Term	Definition
BTN Accounts	Billing Telephone Number accounts. These accounts represent “dummy” phone numbers which are used to aggregate a Reseller’s charges into a consolidated bill. Reseller’s have several separate BTN accounts.
CABS	Carrier Access Billing System
CAP	Competitive Access Provider. Facilities-based carrier providing alternative access service.
Carrier Bill Code	Each bill format has its own unique code. Particular charges will cause the production of a specific bill format. The code is related to each product, and determines on which bill the product will appear.
Casual Usage	Usage dialed through a calling card or 10XXXXXX.
Central Office (CO)	Facility where subscribers’ lines connect to switching equipment.
Change Management	The process by which changes are introduced at Bell Atlantic. Important steps include: 1. Advance notification that a change will occur; 2. CLEC input is considered when making changes; and 3. Smooth roll-out of the change.
CIN	Customer Identification Number. A unique number given to each customer to use as an identifier. Usually a short series of numbers at the end of the BTN.
CLEC	Competitive Local Exchange Carrier
CLEC Handbook	User documentation for CLEC that describes, in 3 volumes, how to establish a CLEC, the technical specifications for interacting with Bell Atlantic, and the business rules CLECs should follow in order to purchase unbundled network elements.
CLEC Live Data	Production data delivered through interfaces that are already operational for real CLEC customers.
CO	Central Office
Connect/Network Data Mover (NDM)	An electronic method of delivering data files. Available for both mainframes and PCs.
COT	Central Office Technician
CPC	Circuit Provisioning Center. The CPC assigns the various components of circuits and distributes the TIRKS word document.

Term	Definition
CRIS	Customer Record Information System. A database containing customer information used for billing.
CSR	Customer Service Record. Details of a customer's fixed monthly charges billed by the local telephone company.
CARE	Customer Account Record Exchange. Industry standard for formatting exchange of subscription information.
Daily Usage Feed	A daily download of usage data from the switch which is delivered to Bell Atlantic's message processing system and directly to the CLEC.
Data-Driven Process	Scenarios tested through the creation of generated transactions, operations data, or live data.
DBT	Design Build Team. The Design Build team processes Requests for Manual Assistance (RMA) with assignment errors.
DCAS	Direct Carrier Access Service system allows Bell Atlantic's Wholesaler customers to perform online functions associated with ordering and provisioning, billing, and trouble administration.
D – Mark	Demarcation Point. Point at which ILEC facilities (usually loops) connect to customer premise equipment.
DID number block	Direct Inward Dialing. A block of numbers reserved for a Centrex/PBX. DID allows internal dialing by entering only extensions.
Document review	Compilation and review of books, manuals, and other publications related to the process and system under study.
DOE	Direct Order Entry System
ECC	Exchange Carrier Code
EDI	Electronic Data Interchange. A process for exchanging information that is subject to industry standards.
EIF	Electronic Interface Format. A standardized file format needed to communicate with DCAS.
EMI	Exchange Message Interface. A guideline published by the Ordering and Billing Forum that shows the format in which usage data is passed to the CLEC.
Entrance and Exit Criteria	The necessary conditions for starting or completing individual tests described in the Test Plan.

Term	Definition
ESOI	Error Service Order Interface is the system Bell Atlantic's Facility Assigners use to notify the negotiator (retail sales person) that there is an error on the order that the negotiator must correct before the order can continue through the provisioning process.
Error/Rejection Notification	Notification generated by Bell Atlantic's systems when a request from a CLEC cannot be filled without additional manual clarification.
Evaluation Measures	Discrete set of measures to be applied to specific test components.
Existence Criteria Type	These are criteria where only two possible test results can exist (e.g., true/false, presence/absence), such as whether a document exists or does not exist.
Expected Results Worksheet	A report format that lists the expected results for each test while allowing the tester to record the current results of the test. This allows an easy comparison of numbers.
FID	Field Identifier. A code used when administering usage limits on residence and business end users. Also refers to fields of information used in the service order.
Firm Order Confirmation	A response from the Bell Atlantic Service Order Processor that acknowledges a successful receipt of an order from a CLEC.
FIRST	System that reviews RMAs in the MLAC before they are manually worked. FIRST makes the assignment for simple errors and the order then continues to flow. FIRST is not an acronym, it is a system.
Flowthrough	An order placed by an CLEC's customer service representative that can be provisioned correctly without manual intervention by a BA-MA's service representatives.
GUI	Graphical User Interface. A computer interface that allows users to access programs and enter data.
Hot Cut	A term used to describe the work done at the main distribution frame during the transfer of an ILEC-owned line to an CLEC-owned line.
ILEC	Incumbent Local Exchange Carrier. The local exchange carrier for a particular area as of 1996. Bell Atlantic is the relevant ILEC.
Inspection	Physical reviews of process activities and products, including site visits, walkthrough, read-throughs, and Work Center observations.
Interim Number Portability (INP)	The use of existing and available call routing, forwarding, and addressing capabilities to enable an end user to retain the same telephone number regardless of which local service provider is chosen.
LATA	Local Access and Transport Area. A geographic area established by law within which a Bell Operating Company may provide telecommunications services.

Term	Definition
Legal and Regulatory Requirements criteria source	This includes requirements specified by statute and regulation, such as FCC orders, court orders, MA DTE regulations, federal and state statutes, and other binding requirements resulting from judicial/governmental proceedings.
LFACS	Loop Facility Assignment and Control System. A provisioning process system used by BA-MA to assign the loop, cable and pair for orders.
LMOS	Loop Maintenance and Operating System. A maintenance management and repair delivery system used by BA-MA for M&R activities related to POTS services.
Logging	Monitoring activities and collecting information by logging process events and products as they happen. Logging can be mechanized or manual.
LPIC	Pre-designated Intra-LATA Carrier, or Local Primary Inter-Exchange Carrier. Telephone company chosen by the end user as being the default carrier for calls outside the local calling area, but within the same LATA. These are also known as regional toll calls.
LSR	Local Service Request. Form sent to Local Exchange Carrier requesting local telephone services.
LUD	Local Usage Detail. LUD is available for measured and message rate end user in a report that may be requested by the CLEC.
Maintenance and Repair Domain	Tests related to trouble administration.
MARCH	Memory Administration Recent Change History system. A provisioning process system used by the Translation Administrators in the MLAC to apply translations to switches.
Master Test Plan	Identifies the overall framework and structure of the test.
MCRIS	Message Customer Record Information System. System used within BA-MA to receive and interpret central office switch usage records.
MDF	Main Distribution Frame. The primary point at which outside plant facilities terminate within a Wire Center for interconnection to other telecommunications facilities within the Wire Center.
MLAC	Mechanized Loop Assignment Center. The MLAC processes RMAs with assignment errors, responds to calls for assistance from the field and performs database management functions.
MLT	Mechanized Loop Test. A loop test used by BA-MA to initially test a POTS loop during trouble shooting.
NAC	Network Administration Center. The NAC performs telephone number administration, some line assignments and monitors performance of switches. Formerly called Switching Administration or SWAD.

Term	Definition
NDR	Network Design Review. A comprehensive planning process by which the scope of a network project is established along with the preliminary timeframe in providing service to a CLEC. This is required for any new facilities based CLEC.
NOC	Network Operations Center. The NOC executes complex translations, provisions trunks, and performs software provisioning. Center is also responsible for switch surveillance, traffic control/analysis, receipt/screening of trouble tickets for the maintenance groups, and performs software input conditioning of switches for installation.
NORD	Network Operations Results Database. NORD contains Maintenance and Repair service data, which is used in metric calculations.
OCN	Operating Company Number. A 4 character code to identify any service provider. Specifically used to identify the Reseller on usage detail records.
Online Service Provisioning (OLSP)	System which allows for activation and provisioning of service orders online.
Operational Analysis	Operational analysis focuses on the form, structure, and content of the business process under study. This methods used to evaluate day-to-day operations and operational management practices.
OSS	Operation Support Systems. Systems used to perform pre-ordering, ordering, provisioning, maintenance and repair, and billing.
Parity Criteria Type	These are criteria that require two measurements to be developed and compared, such as whether external response time is at least as good as internal response time.
PAWS	Provisioning Analyst Workstation System. PAWS is used to manage and assign work in the MLAC, DBT, and NAC.
Performance and Capacity	Methods used to evaluate the performance and capacity of selected elements within the four domains. Relates to tests to determine if BA-MA's OSS can handle quantities of orders matching a reasonable forecasted demand.
PIC	Primary Inter-exchange Carrier. The long distance company to which traffic is automatically routed when an end user dials 1+ in equal access areas.
PON	Purchase Order Number
Port	Point of access into a network.
PREMIS	Premise Information System

Term	Definition
Pre-Ordering, Ordering, and Provisioning Domain	Tests related to CLEC's acquisition of customer information, placing orders, and ensuring correct and timely provision and notification of order status.
Provisioning	The act of supplying telecommunications services or UNEs.
Qualitative Criteria Type	These criteria set a threshold for performance where a range of quality values is possible, such as level of customer satisfaction.
RBTN	Reseller Billing Telephone Number. This is the master account for a reseller by which all charges are grouped for placement on a single reseller bill.
RCCC	Regional CLEC Coordination Center. The RCCC coordinates provisioning of hot-cuts, DS1, DS3 and EEL service for CLEC orders.
RCMAC	Recent Change Memory Administration Center. The RCMAC handles work planned and unplanned fallout from BA-MA's provisioning systems to program the switches.
RCMC	Regional CLEC Maintenance Center
Recognized Standards Criteria Source	This includes widely recognized standards and guidelines promulgated by sanctioned industry and governmental organizations and other bodies.
Relationship Management and Infrastructure Domain	Tests relating to activities, processes and documents that are focused on the establishment and maintenance of the CLEC/ILEC relationship.
Report Review	Reviews and analysis of historical data, reports, metrics, and other information in order to assess the effectiveness of a particular system or business function. This includes performance measurement reports and other management reports.
Resale Handbook	User documentation for CLEC that describes, in 3 volumes, how to establish a reseller, the technical specifications for interacting with Bell Atlantic, and the business rules resellers should follow in order to resell Bell Atlantic products and services on an unbundled basis.
Resale Service Center	BA-MA personnel providing support services for the submission and processing of service orders and the maintenance of services sold for resale.
Resale Services Support Center	Group within the Resale Service Center that provides support for RETAS/DCAS use and system troubles, and for out of hours provisioning problems.
Reseller Sub-Accounts	Each converted and user account automatically becomes a reseller sub-account. Each reseller sub-account contains the following identifiers. 1. Original end user BTN + new Customer code, 2. Bill Period, 3. ECC, 4. CIN.

Term	Definition
RETAS	Repair Trouble Administration System for wholesale and resale customers. RETAS is accessed via a World Wide Web GUI that serves as a front end.
RMA	Request for Manual Assistance. The RMA handles fallout from BA-MA's automated provisioning systems. Unit of work assigned to personnel in the various provisioning centers.
RSID	Reseller Identification Code. Bell Atlantic's term for exchange carrier code (ECC).
SARTS	Switched Access Remote Test System. An M&R testing system used by BA-MA to trouble-shoot specials services circuits.
SBN	Special billing number.
SBTN	Sub account Billing Telephone Number. End user telephone number for a reseller account.
Scalability	The degree to which an application can be scaled to accommodate order of magnitude increases in transaction volumes and users.
SDM	Service Delivery Method. Bell Atlantic offers 3 methods for delivering services to its wholesale customers. These methods are UNE, UNE-P, and Resale.
SMARTS	Service Order Management Administrative Report Tracking System. A network system used by BA-MA to administer and track service orders requiring the dispatch of technicians.
SOAC	Service Order Analysis and Control. System that controls the flow of orders through the provisioning process.
SOP	Service Order Processor. Provisioning process system used for order entry.
SORD	Service Order Results Database. SORD contains information on all orders processed by Bell Atlantic. Data is extracted from SORD to calculate provisioning metrics.
SPC	Software Provisioning Center. The SPC creates the translations used to program switches for Centrex Plus, FlexPath, and ISDN services.
Special Services	Group responsible for provisioning and maintenance of special services.
STARREP/SIMS	Retail analog to RETAS

Term	Definition
Supplements	A change to an order taken after the original order was submitted, but before the order has been executed. Order execution should include all supplements.
Suspend for Non-Payment	Collection Activity including suspension of outgoing calls (one-way), or both outgoing and incoming calls (two-way).
SWITCH/FOMS	Switch/Frame Operations Management System. SWITCH maintains the inventory of inside plant equipment. FOMS is used in the provisioning process to dispatch Central Office Technicians for inside plant wiring.
Test Bed	A set of fictitious customers that are designed to assist with testing. The test bed consists of working lines and provisioned products, although the owning customer is fictitious. The test bed is used to test all BA-MA system functions.
Test Call Matrix	A list of call types and the quantity of calls for each type that should be included in a particular test.
TTG	Test Transaction Generator. This system will be created to support the testing effort. The TTG will simulate CLEC behaviors by sending transactions through BA-MA's OSS. The TTG will record the success or failures of each transaction and create reports.
Test Domain	A specific testing area with defined targets, measures, scenarios, evaluation methods, and test processes.
Test Scenario Coverage Matrices/Traceability Matrices	A list of products or processes that are involved with each scenario. Describes how testing elements are traced from the compliance requirements through the test process.
Test Scenario Index	Master list of scenarios from which specific scenarios will be selected to be used in the testing.
Test Scenario to Metrics Analysis Index Cross Reference	For each scenario, a list of metrics that are examined during the test.
Test Scenarios	Scenarios describe realistic situations in which CLEC's purchase wholesale services and network elements from BA-MA for resale to the CLEC's end user customer on a retail basis.
Test Target	A discrete set of measures to be applied to specific test components.
TIRKS	Trunk Inventory Record Keeping System. System used in the provisioning process to assign circuits to orders.
TISOC	Telecom Industry Services Operations Center. This center is divided into wholesale and resale operations. This is a single point of contact for processing Reseller service requests.

Term	Definition
TN	Telephone number.
TRACKER	Work manager-undergoing testing in the RCMAC.
Transaction Driven - CLEC Cases	The CLEC case method requires extensive participation by the Phase 2 tester to observe the execution, measure and monitor progress and results, and inspect and audit the execution and results.
Transaction Driven – GUI Cases	The GUI test method is applied to test cases that use the GUI approach in real-world actions.
Transaction Driven – TTG Stress/Load Volume (100 percent automated)	The purpose of this stress and load test method is to test capacity and identify potential choke points in the accessing of information from BA-MA business processes.
Transaction Driven – Test Transaction Generator (TTG) Normal Volume (automated and interactive)	Based upon normally expected transaction volumes, the TDG will derive and store expected results for comparison with actual results.
Transaction-Driven System Analysis	Transaction driven system analysis relies upon initiation of transactions, tracking of transaction progress, and analysis of transaction completion results to evaluate the automated system under test.
Transaction Generation	Transaction generation is the use of live, historical, and/or generated data and data processing capability to evaluate an automated and/or manual system under test.
Unbundled Access	Ability of other LECs to access and use BA-MA network components to fill in gaps where these providers' networks do not have their own facilities.
Unbundled Loop	A transmission channel between an end user location and LEC central office that is not a part of, or connected to, other LEC services.
Unbundled Port	An interface on a local switching system that is not bundled with a loop or transport facility, and provides access to and from the switch and the functionality of the local switching system.
UNE	Unbundled Network Element. One of seven network elements as defined by the Telecommunications Act of 1996.
UNE-P	Unbundled Network Element – Platform. This consists of a loop and port sold in combination to a CLEC. UNE-P service provides all network elements necessary to provide service to the customer without requiring the CLEC to combine the elements themselves.
Usage Return	A part of the claims process for usage appearing on the Daily Usage Feed. In order to facilitate investigation of errors, the CLEC is required to transmit back to Bell Atlantic usage records that are believed to contain errors along with error codes. Error codes are specified in the EMI guidelines.

Term	Definition
USOC	Universal Service Order Code. A 3-5 character alphanumeric code that represents a product or service.
Verification and Validation	Methods used in the evaluation of activities and processes not amenable to data-driven testing, but which require verification and validation.
VETS	Verification Evaluation and Testing System. System which allows system testing on working and testable lines.
WFA/C	Workforce Administration/Control System. The principal provisioning and maintenance and repair management and tracking system used by BA-MA coordination centers to deliver and maintain telecommunications services.
WFA/DI	Workforce Administration/Dispatch In system. The principal Provisioning and maintenance and repair management and tracking system used by BA-MA to dispatch Central Office technicians to the field for inside wiring.
WFA/DO	Workforce Administration/Dispatch Out system. The principal provisioning and maintenance and repair management and tracking system used by BA-MA to dispatch Central Office Technicians to the field for outside plant work.
WFM	Workflow Management. The WFM is a center which supports the installation, maintenance and cable repair functions for POTS.
WOT	Wired or Translated. WOT is the date by which the translation must be loaded to the switch.
Wholesale Technical Support (WTS)	The organization within Bell Atlantic responsible for technical issues concerning the Daily Usage Feed transmission and data content.
WTN	Working Telephone Number